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## Stall Feeding of Dairy Cows in its Relations to Economic and Successful Farming.

An Essay read before the Woodlawn, (Va.) Farmer's Club.

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The time is coming, and we think is near at hand, for the general accomplishment of one of the most important changes in the art of agriculture. The nomadic or rambling system of feeding cattle, as practiced among all civilized people since the days of the patriarch Abraham, is destined through the irresistible influences of enlightened experiments not only by the farmer himself, but also by the chemist in his laboratory, to give place to that more convenient and economic practice of restricting them to narrower enclosures, and furnishing to them in managers in their stables all their necessary forage and feeding stuffs of every description, through the seasons of spring, summer and autumn, as well as in the time of winter. The arguments in favor of the latter practice are so many and conclusive, that now, after years of the most satisfactory trials, we should be very reluctant to return to the old nomadic system, with its incidental expensiveness, wastes and inconveniences.

Pasturing, in the outset of our argument, requires for the same ultimate results a greater number of acres than stall feeding, and consequently, necessitates double, treble or quadruple the immediate capital for the purchase of lands; and this outlay is still further increased before any returns of products by the unavoidable item of enclosing and fencing materials for the pasture grounds, which, with the increasing scarcity and value of timber and lumber, has come to be almost as expensive as the land itself. Grounds now-a-days cannot be well fenced with durable materials for less than ten dollars an acre for areas of say one hundred acres. This cost of fencing amounts to one thousand dollars to begin with, with a yearly accruing interest of sixty dollars and the sinking of the original capital at the end of sixteen or twenty years, by the wearing out of the enclosures. If we call the period of duration twenty years, we shall by that time have had swallowed up an original outlay and annual interest of twenty-two hundred dollars.

When the stall feeding system is pursued, all this outlay can be applied to the ground in the shape of fertilizers, which are vital, continuous and non-sinking capital, to be turned over and over, all the time yielding good interest, and always with due care remaining on hand, like deposits in a reliable bank, to be drawn upon at will. It is one of the rare instances in the business economies in which, despite of the old saying, one can have the cake and the penny both. Stall feeding, in the beginning, requires roomy stables, which can be thoroughly ventilated in summer and made entirely comfortable for winter. These stables should have floors of wood with easy stanchions and tight managers in front, admitting of no wastage of

feed, and with a broad alley or drive way in the rear for droppings and for the handy carting away of manure daily, and the carting in of forest leaves, dry muck, turf, loam, sawdust, river rack, etc., as most convenient for using to absorb all the liquids otherwise liable to be lost. All of these provisions, however, are just as necessary in the one system, if profit is aimed at, as in the other. Provision for ample absorbents in the stables is one of such great importance to every farmer who adequately appreciates the necessity of realizing in every way the highest value out of every kind of home manurial substance, that while only a brief allusion is here made to it, we design to consider the subject at length and in all its relations to economic and progressive farming, in a future essay on "the making, preserving and proper application of home manures."

Whoever commences the soiling system, if he would have success, must arrange always in time for the opportune forthcoming of all his necessary supplies of subsistence, and particularly, he must not make the grievous mistake of starting with too much stock, but gradually increase it as his ways and means for more ample shelter and subsistence enlarge. He must carefully study the situation before him in all its details, and endeavor, from day to day and year to year, to improve by observation, experiments and reading upon all his methods. In a word, he must be an enthusiast, but always a calculating and close economist. He must be like an efficient army commissary—always ready to issue supplies. To his herd, he must be a faithful, untiring servant. He must observe their habits, study their needs and look diligently after their comforts, for they are his capital invested; they are to yield his revenue. His care and trouble bestowed upon them, although sometimes seeming to be irksome, will sooner or later be amply repaid by them.

About the middle of August let him prepare, by thoroughly plowing, a sufficient breadth of land; manure without stint, and sow with rye, clover, timothy and orchard grass seeds, covering in smoothly with the harrow. By the beginning of the ensuing May, if all the conditions have been favorable, the rye, heading out and of luxuriant growth, will be ready for cutting and feeding, and will be a most grateful change from the dry forage of the long winter. The flow of milk will be greatly increased, and with alternate rations of corn and cotton seed meal and wheat bran, cream for excellent butter will be produced. On this succulent, wholesome feed, the cows may be fed until the heads are well in blossom, then the growth not already consumed may be cut, cured and put under shelter, and will be a very present help to cut up and serve with concentrated rations in the winter. By this time the clover sown the preceding spring, or with rye the fall before, will be coming into bloom and will afford a still more grateful change than did the early May rye, and still more increase the richness of the milk. A change may be made from the clover after a time to oats, which were

sown at the earliest opportunity in the spring, and by the time the clover of the fields is ready for cutting and housing for hay, corn which was drilled the last of April or first of May in rows thirty inches apart, manured heavily and thoroughly worked with cultivator, will be coming on to continue the succession, and by a regular fortnightly continuance of corn planting thereafter, never omitting the liberal manuring with barnyard manure, an abundant supply of green fodder may be had until after frost. At intervals, cuttings of second-crop clover, if not needed to cure and house for winter, may be substituted with great advantage for the drilled corn.

About the last week in July, ample breadths of rich, mellow ground may be sowed with purple, flat, strap-leaved turnips, which under favorable circumstances make a large yield of excellent milk in both autumn and winter, and while free from any decay of leaves or roots will not affect injuriously the taste of either the milk or butter. Pumpkins, too, of the large yellow field variety, which were planted among late potatoes or among the earing corn, will come in very opportunely. They are relished by cows and turned to profitable account in the milk product. If time and ground are at disposal, ruta bagas may be planted for winter use. With mangels as a cattle feed, we have never had any experience, and of their merits cannot here speak.

As new planting grounds are needed for continued successions of drilled corn or rye, grass lands which have begun to deteriorate, and in which noxious weeds are appearing, may be plowed and then corn planted, as well as such grounds as have already yielded crops of kale, spinach, early potatoes and first plantings of drilled corn, always remanuring and keeping the soil well stirred with plough and cultivator until prevented by advanced and vigorous growth of the crop. The products of an acre of drilled corn under favorable conditions ranges from ten to twenty tons. Practically, there is little difference found between the food values of corn fodder and hay. The corn fodder, according to chemical analysis, is known to be almost identical with meadow hay, and while there is less of nitrogenous or muscle-forming matter in it than clover hay, there are more of the fat-forming elements, which are most valuable in feeding for the dairy. Sweet corn fodder is still richer in these elements, and if well cured is undoubtedly the best fodder possible for cows in a milk or butter dairy. The white, soft, half-grown, washy fodder from broadcast sowing is comparatively worthless, being mere water and innutritious cellulose. The sugar, starch and albuminoids are not developed and there need not be much wonder that some who have grown it in that way find it poor feeding material. If at any time there should be a surplus of large growth fodder over current necessities, it may be cut, cured and put under shelter.

Of course, it must not be forgotten to provide green forage for the dairy in next year's May, by sowing rye in August as previously

done, and seeding as before recommended with grass seeds. A neglect of a week of time of sowing corn or rye often greatly interferes with the continuity of the forage. Soiling is something like the tread-mill process. The usual step has got to be taken and kept up unceasingly. The grass seeds sown with the rye hardly ever fail to take well, making a good growth during the autumn, standing the winter well, and at the opening of spring advancing rapidly, and will often be in head by June. By a continued practice of the method of renewal of grass already mentioned, we are more and more satisfied that it is the one of all others we have tried the most worthy to be recommended. The grass is renewed more surely and but few noxious weeds have time to be established. The white daisy particularly, may in this way be exterminated. For good grass crops there are needed not only large supplies of vegetable manure, but also that the soil be frequently stirred and aerated. The deteriorating grass lands may also be put down to late potatoes, and may be followed by rye or wheat and clover.

Cows stall fed, should have sufficient intervals of freedom in well sheltered and shaded enclosures about their stables during the day in all seasons of the year, and should have free access to supplies of good spring or well water. Rain water, collected in cisterns or tanks, becomes more or less tainted and often gives an unpleasant taste to the milk and butter. And here we make the observation, that throughout, from the beginning in the dairy business, purity and wholesomeness, not only of water, but of food also, in connection with great cleanliness about the stables and the milking, are indispensable requirements for good butter. The soiling or stall feeding system must be adopted by our dairymen as a matter of business from a financial stand-point. It is a business which must be practiced in a perfectly systematic way, or it will fail to satisfy expectations. Strictly, correctly, and faithfully pursued, it will always give the most profitable returns in milk and butter and appearance of the animals.

From one rod square of ground the product of a good growth of clover weighing from fifty to seventy-five pounds in the green state, will be found sufficient long feed for a dairy cow one day, cut and fed to her in the stable where all of it may be consumed and none of it be lost. Ten rods would be sufficient for her ten days, or for ten cows one day. But if these ten rods could be enclosed and two cows be pastured at large on the clover, they would by the second day have what they had not eaten trampled under foot, fouled and wasted. If the ground can be made to yield several crops in a year, which is possible with the great increase of manurial resources and the system of constant cropping rotation, every acre may be made to sustain its cow. All this involves labor; nothing is more certain than that; but it is equally certain that without labor the soil can produce no profitable crop, and also that the more labor we can manage to put usefully upon the soil the more profit we can get out of it.



There is another great advantage resulting from cutting instead of grazing the soiling crops of grass. Briars and rank weeds are kept down and the clover stocks left uninjured. Whereas, in pasturage, briars and weeds are left to flourish, giving a rough, unsightly appearance to the fields, and in wet times the grise stocks suffer from the sharp hoofs, while in very dry times, when pasture is scarce, they are gnawed too close or pulled up by the roots; and more than all this, the soil is trodden down and made too compact for the roots of the pasturage. From the results of all experiments made to determine the comparative advantages of the one system of feeding over the other, both in this country and in Europe, the fact seems to be established that at least four times the number of animals may be subsisted on the products of land by soiling as by pasturage, and the practice is just as applicable to the subsistence of swine as to that of cattle and horses.

By the middle of October there are no longer supplies of green grass and corn, and it is presumed that ere this season every thrifty, intelligent and provident stall feeder has filled barns and stable-lofts with ample supplies of hay, straw, and well-cured, bright corn fodder, with none of its rich saccharine juices changed, and has stored away in caves a large supply of turnips, vegetables, etc. And now, the important question with him is—how he shall most economically and profitably feed all these valuable products out during the winter. This question we propose to consider in our next essay.

#### Clover.

Tired nature's sweet restorer, balmy sleep;  
He, like the world, his ready visit pays  
Where fortune smiles: the wretched he forsakes;  
Swift on downy pinions flies from woe,  
And lights on lids unsullied with a tear.

—Dr. Young.

The human body and mind to retain their proper vigor and efficiency, need from time to time, rest and refreshment. A farmer may open new fields, fresh, fertile, vigorous fields, but after years of repeated croppings, these soils lose their productive power to a great extent, and then their fertility must be restored by the skill and management of the farmer.

Clover is the great fertilizer—a fertilizer of magical power. Few farmers realize the power and value of clover as a fertilizer. Shade is a fertilizer of very great power, and a well-set field of clover, if undisturbed by stock, furnishes a thorough and complete shade. It grows luxuriously and shades perfectly. The value of the stalk as shade, and the value of the semi-decomposed stalks as food for young and growing plants, is very great. One variety of vegetation in its decay, furnishes food and nourishment for another.

It is estimated that on every well-set acre of clover, there are two and a half tons of clover roots. The long tap root of the clover, penetrates to the sub-soil five or six inches. The atmosphere is loaded with fertilizers, which are taken to the sub-soil by the clover roots, and these roots bring to the surface, potash, soda and other valuable fertilizers. In clay soil, there are large quantities of potash, soda and other valuable fertilizers in the sub-soil, which contribute materially to the development and perfection of vegetation. The sub-soil may be reached, and its fertilizer made available to all cereal crops by clover roots, by deep plowing, and by sub-soil plowing.

Clover is the cheapest of fertilizers. A bushel of clover seed, costing five or six dollars, will sow eight acres. The clover if allowed to attain its full growth of stalk and root, and to remain on the ground, is a valuable fertilizer. Whereas, to manure from the barn-yard, six cords to the acre, requires three men, four horses, and two wagons—a man to load, a man to drive, and one to scatter the manure. Manure should be scattered

as hauled. In heaps it heats and loses its strength.

Clover is a beautiful crop. The eye of the farmer and of all lovers of the beautiful, sparkle with delight, on seeing a well-set field of clover. Every one feels that clover is a great fertilizer, and is a sure indication of comfort and prosperity.

Clover is valuable as a hay crop. One and a half or two tons of clover may be made to the acre. For fattening purposes "timothy is to clover as 11 is to 18." Clover hay is worth nearly double, so say the best authorities. After making small clover hay, from two to four bushels of clover seed may be made from the same acre in a favorable season.

Some farmers sow clover because they like nice colts, fine cattle and fat pigs. The clover is dwarfed in stalk and root by grazing. In that case the clover crop goes into the pocket of the sower, instead of remaining on the field as a fertilizer.

There are two varieties of red clover—the common red which grows about three feet high, and which may be grazed until the first of July, and then yield a crop of seed; and the sapling or mammoth clover, which has a larger, softer stalk, grows five or six feet high and lodges, ripens about the 5th of July, and is therefore better suited to mix with timothy for hay. It is claimed that cattle and horses prefer the grass and hay of the sapling clover. The second crop of sapling clover does not salivate horses, and in good seasons makes fine fall pasture. The mammoth clover cannot be grazed after the first of June if we want to make seed.

Clover may be sown in February or March on frozen ground, in April or May and covered by a harrow, or in the fall, in September, on rye or barley fields. If the clover fails on wheat fields they can be re-sown in August or September and the seed covered by the harrow.

All the crops in Maryland could be doubled in five years by the proper use and management of clover. To obtain the full value of clover as a fertilizer, one crop, at least, should be left on the ground. The first lesson for a farmer to learn is how to make clover. The farmer who cannot raise clover cannot farm successfully. In our poorest land, one or two hundred pounds to the acre of a good commercial manure would make a crop of rye or oats that would pay the expense of the crop and secure a crop of clover besides. All fields, except those in summer crops, ought to be in clover. A field in clover gets richer, a field in blue grass gets poorer.

But valuable as clover is as a fertilizer, the farmer must not neglect the manure "bank." The barn-yard, the hog-pen, the poultry-yard will each contribute largely to the success and profit of farming. The manure "bank" is the farmer's best friend. Lime, bones, clover, all fertilizers, act with greater power and efficiency on land manured from the barn-yard. THOMAS MADDOX.

January 20, 1882.

#### The Drouth of the Past Season and What it should Teach us.

##### WHAT IS MAN'S POWER AND DUTY.

We are told on the first page of Holy Writ, "God said unto them, Be fruitful and multiply and replenish the Earth, and subdue it, and have dominion over the fish of the sea, and over the fowls of the air, and over every living thing that moved upon the Earth;" and we are told that after the creation of the Earth and "every plant of the field before it was in the Earth, and every herb of the field before it grew, for the Lord God had not caused it to rain upon the Earth, and there was not a man to till the Earth, but there went up a mist from the Earth and watered the whole face of the ground." After man's creation and he was

placed in the garden home, we are told that "A river went out of Eden to water the garden, and from thence it was parted and became four heads" of the four great rivers, bisecting the East and supplying that vast region with water that was necessary to enable man to "subdue the Earth," and cause it to bring forth its crops in abundance for his support and comfort; which it did, if history is to be credited as truth.

As instance Egypt with its small territory—the valley of the Nile—fed all the East, and what was called the world at that period in man's history. And why? Not only because the land was always kept abundantly rich by the overflow of the Nile, but necessity—from the absence of rain—taught them the wisdom of irrigation. And we find that they built immense reservoirs extending the entire length of their country, in which they stored the waters of the Nile when its annual overflow covered their land. Upon the subsiding of the water their land became ready for planting and cultivation, and they could draw from the immense store of water sufficient to keep up a moist and soluble condition of the food in their lands for whatever they grew therein. Hence the rapid growth of every crop and the early maturity of the same. We are told they raised three crops annually on the land; two of grain and one of the various kinds of vegetables they used. Extravagant as this seems to us, we are forced to believe it, from the many millions of their own people in their small territory they had to feed, besides feeding the rest of the world. Even up to and after the Roman subjugation we are told that Rome drew her great supplies from Egypt.

Now, without going back to those early days and people, let us look at the condition of the present day as to the product of the soil and the influences which produce the fullest crops. If we look at England proper, it has a greater rain fall and moisty climate than any other part of Europe. They keep their land good and compel a wise culture, raise the heaviest crops, especially of grass, roots and grain; but from their humid climate they often have difficulty in saving them. The rest of Europe, with a generally pleasanter climate and naturally as good land and as well kept and cultivated, but not so much rain fall, produces good crops, but not so full and heavy as England. I believe, as far as we know, there is little, if any attention paid to irrigation. Now, when we look at Central and South America, in parts of it where they have rain fall, the vegetable growth is the most wonderful of any portion of the world, while in other sections, where they have little if any rain fall, there is scarcely any vegetation without irrigation. But when they make provision for irrigation, as they do in the valleys adjacent to the great rivers, as far as the lazy people do attempt to cultivate a crop, the production is beyond our belief. The writer's elder brother was engaged in Peru many years as a civil engineer to supply water for the city of Pita and to irrigate the land near the coast. He described to me the manner of the Haciendas, or divisions in large holdings, by the descendants of the old Spaniards, the conquerors of the Peruvians.

The large estates are worked by the native *peons*, as they are termed. They are not properly slaves, as the blacks were with us, but they are slaves to a certain extent. They pay to the owner, or hacienda, one or two days' labor in each week, and they have to carry government dispatches from one hacienda to the next, whenever the government wishes to send from Lima to any other part of the country. From the great number of *peons* on each hacienda, this duty falls but seldom on the same *peon*, so that their tax to the government is not a very heavy one. But the hacienda owner's exactions are a heavy one for the privilege he grants the *peons* on his land. The amount

of land allowed each *peon* for his support is a *chagra*—just one-eighth of an acre—with a supply of water from the *soca*, or canal, to irrigate it, and upon this he does live. His crop is yam or a species of sweet potato, and Lima beans. Now for his crop and manner of cultivating it. (I will have charity for your doubts, but I believe it, for I know my brother would not misrepresent.) The land is rich and they dig holes nearly three feet deep and three feet equi-distant. This would give 612 holes for the plants on an eighth of an acre. They pulverize the ground thoroughly, then turn on the water, wetting it, then plant. Through the season they keep the ground moist, so their crop is all the time growing, and when gathered the average yield is one barrel to the hole. A barrel, according to our measure, two and one-half bushels, would be 515 bushels per *chagra*—an eighth of an acre—consequently 4,120 bushels to the acre. In vulgar phrase, "how is that for high?"

Now let us come home and see what our observation teaches or should teach us. Does any worker of the soil or observer of its cultivation and the rain fall from one season to the next doubt that the crops are fullest and best when we have frequent and replenishing showers during the growing season? When they have long gaps between rains, and, as a consequence, what we call a dry time or season, we have but short or moderate crops. But when it comes as it did last summer, when for months together we had no rain, we have but little crops and much heartache and suffering until another season shall roll around, when we hope the rains will come and our crops be full and relief and comfort be ours. As we have been in the habit of doing things, it is not unnatural that some should go so far as to look upon the drouth of the past summer as a punishment by our Gracious Father for our sins and disobedience, and they sit down in their assumed humility to bear their chastisement—no doubt believing it is right. But is it not a species of lazy cowardice, growing out of our failure to do our part as thinking, thoughtful, courageous men? To do our part as children of so great and gracious a Father as we know Him to be, is not the charge of Cromwell to his followers much better—"Trust to the Lord and rely upon your bayonets," or "Have faith in God and keep your powder dry"? Or in other words of sound and sober reason, trust in God, as we should in all things if we live rightly, and use the powers of *mind* and *strength* that He has endowed us with, and we shall never fail, for His word is ever true, and from time everlasting all His promises are coupled with the condition that we do *our part* according to the strength and opportunity that is ours.

Now I think I have philosophized and moralized enough, and will try and show what is in our power to do and what we should do to save ourselves from the sad effects of the calamitous drouths we are subject to; and I think, upon examination, the plainest mind can see how important it is and how easily accomplished, both on hilly and flat lands. Our hilly country abounds with flowing streams which will give power by any simple hydraulic arrangement to throw up a sufficient portion of the flow to keep a store of water in a small lake, made on some high point, from which it can be distributed by a small hose to adjacent lots of land; and the little lake so made, will serve the double purpose of fish and ice pond. In the flat lands, especially along the coasts, where they suffer more from drouth than anywhere else, particularly in peninsula countries like our Eastern Shore—the narrow portion of it belonging to Virginia—the upper stratum or clay formation is only a few feet deep, then we come to a sandy porous stratum into which rain goes most readily. But here we see the wise and kind care



of the Author of all that is good for man's safety. This fresh water is kept in this sandy formation as the salt water from the sea and bay percolates the under strata clear through from sea to bay. But nature's law being so, the salt water is the heaviest and keeps the fresh water always on top, without serious loss by intermixture, as all persons know that the wells rise and fall with the tides, but the water remains fresh. So here the people have, but to sink shallow wells and put up little wind mills and pine plank cisterns, elevated enough to distribute the water through hose, to irrigate their land, so none need suffer.

I hope our people will take this subject into thought and do their duty to themselves, and discharge their obligation to their gracious Father in the use of the means and power He has endowed them with for the safety and comfort of the dependent ones. He has entrusted to their care—the helpless ones of infancy and old age. If you think these thoughts worth a place in your valuable journal, in a following communication I will be glad to give some views as to plans and cost of irrigation in different localities.

R. E. DUVAL.

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### Stable Manure.

THE AMERICAN FARMER for December, 1881, contained a remarkable article from Mr. Lawes (though all that he writes is remarkable). We have watched his long series of observations as to the effects of the elements of stable manure in the form of artificial fertilizers, and the controversy between him and Liebig about the relative value of ammonia and phosphates, or other manures which are derived from the earth exclusively, having been appointed chemist of the old Agricultural Society embracing Virginia, Maryland and Delaware, by the first President, the late Charles B. Calvert, about the time these experiments were originated.

The first point in the above essay is the basis of the valuation of stable manure from a farm; whether the kind of hay or the proportion of corn and oats fed therefrom in the same period would vary the result. What we call "barn-yard manure," derived from corn-stalks and straw fed in the barn-yard during the winter months, does not yield one-half of the proportion of the essential elements of manure, if those elements are assumed to be the last three, viz.: ammonia or nitrogen, phosphoric acid, and potash. The practical value of this may be illustrated by the fact that millions of dollars are annually expended in composting such manure. If, as Lawes assumes, there is no certain mode of improving stable manure by any "management," much less will it pay to "touch" (or compost) "barn-yard manure." It is the universal custom among large farmers here to haul such manure three times, viz.: stack it up near the barn-yard, or haul it out into the field where it is to be applied and there stack it up, or haul it to the wharf and sell it to some trucker after it has been corded up. In the latter case it is not only handled twice, but the freight and subsequent hauling must indicate its practical value as equal to the estimated value of "stable manure." For instance, Lawes estimates a ton of stable manure to contain—

Nitrogen, 15 lbs., worth @ 25 cts.....	\$3 75
Potash and phosphoric acid ("as phosphate of lime"), each, @ 3 cts. for 30½ lbs.....	61
Straw.....	14

\$4 00

If the handling and hauling of a ton costs one dollar, the farmer must pay two dollars for every ton after he produces it. Consequently, if barn-yard manure is not worth half as much as stable manure, it costs more than it is worth (viz.: two dollars per ton) to haul it out upon any cultivation.

One of the most successful practical farmers on this peninsula, the late A. J. Vande-

grift, objected to hauling the best Jersey marl three miles from our wharf, where it had been presented to me for experiment, and remarked that "it would pay him better to purchase phosphates than to haul his own barn-yard manure on the premises." This gentleman had recently paid \$1.75 per cubic yard for stable manure in Washington, apart from the freight to St. George's Lock and a haul of three miles therefrom. King James denounced tobacco as a worthless nuisance, but the common consent of mankind has determined its "money value." So, also, as to barn-yard manure. Mere authority will never restrain its use. Quinine and morphia have not discarded Peruvian bark and opium, however uncertain these natural products must ever be when compared with the uniformity of their proximate principles or alkaloids. So, also, timothy hay and oats, as food for stock, must ever be worth more than their relative value as to corn, assuming nitrogen as the essential element in each. Nevertheless, if it is demonstrated by Lawes that farmers only get 15 per cent. of the most valuable and expensive element which is the characteristic of stable manure (nitrogen) "during fifteen years" (!), it seems most reasonable that a compost or nitre bed is the most economical "bank" or deposit for these residuary products of every farm, especially if the systematic stratification which we have indicated on page 48 of the last volume of this journal is adopted. There must ever be much animal refuse accessible to every farmer that is lost (or worse, a nuisance or expense), unless composted systematically.

Apart from this, fish are now used in such composts, being utterly unmanageable as manure in any other form. I have recently been requested to suggest some mode of remedying the loss of such animal refuse by the escape of the larvæ (or maggots). I have no doubt that some of our concentrated acid phosphates will not only remedy the difficulty if freely bestowed, but also reduplicate the value of all composts and reduce the relative cost of hauling less concentrated manures which are necessarily connected therewith. Many farmers are convinced by the best authority, and when such as Mr. Lawes pronounces an opinion, there is no appeal. It is like the negro and the pig: he repeats his former experience, though he has it frequently demonstrated that the pig costs him double as much as the worth of the pork it produces.

All farmers have stable manure, but the fact that they can buy its essential elements at half the price never will induce them to attempt such economy. What they want is not the fact that if they spend some labor on stable manure in doubling its value, they might purchase the result at half the price. All admit that even "raw bones" will dissolve if crushed and stratified with stable manure. All admit that no expert and successful trucker will attempt to raise "early vegetables" with "long manure;" it must be composted, and thus assimilated to the immediate wants of the plant. In the moist climate of England such manure may be "directly transported from the stable and confined to the rows of truck;" but in our climate, unless the soil is clay and requires division, one half of the rain would be lost, and the plants would perish if "a dry spell" should occur, whereas if the same manure were reduced by compost with "ditch-bank" until it resembled an ash-heap, it would not "remain twenty years in the soil and only supply the crops during all that period with 15 per cent."

It is now admitted and demonstrated that the ammonia of stable manure and Peruvian guano, much less sulphate of ammonia, is not immediately assimilable by any plant, as such. That is, all ammonia must be converted into nitre before it can enter any plant (nitrate of potash, nitrate of lime, etc.). How much more is the ammonia of clover dor-

mant; that is, those elements in clover which are capable of forming ammonia as the clover or stable manure rots. If so, why wait twenty years for 15 per cent. of this most valuable element? The argument is, a fortiori, for a compost. Indeed, it would reduplicate the economy if every farmer could allow his compost to become more mature and perfect as a "nitre bed," by keeping it one or two years, though he purchase concentrated fertilizers as a substitute therefor in the meantime. Nevertheless, he will spend more money in lime, though he is convinced that it only hastens the decay of a clover lay, and though he knows that its efficacy would be seven fold if properly stratified in a compost.

It may be true that "it is more economical to purchase concentrated fertilizers than haul manure from the barn-yard, as was stated by one of the most expert and successful farmers" (as above stated), but the policy of the negro with his pig is the most practicable ever since Cato said "Take good care of your compost," more than eighteen hundred years ago. If stable manure is hauled at all, it should, if possible, be hauled in the form in which it is most promptly available to the plant of most rapid growth, especially as most farmers never have half enough for any one cultivation. If so, time will so concentrate it in a compost that one third of the hauling may be saved, and if confined to the hills of corn, every farmer could have sufficient compost to cover every acre, and not be compelled to wait "twenty years" in order to obtain 15 per cent. of it—according to Mr. Lawes's actual experience with the best stable manure in his own cultivations.

DAVID STEWART.

Port Penn, Delaware, January 3, 1882.

### Tobacco or Canning?

The Deer Creek Farmers' Club met at the farm of Mr. Wm. F. Hays, on Saturday, Jan. 7th. In the absence of the President, Mr. Wm. Munnikhuyzen was called to the chair. The Committee of Inspection, consisting of Messrs. Moores, Archer and Thos. A. Hays, spoke in terms of highest praise of Mr. Hays' Short Horn Cattle, which are as fine as any in the State. His 21 head of stock cattle were well selected and in good order; his barn, which is one of the best in the county, has every convenience; he has an abundance of feed for his stock, which he is using in a judicious manner by cutting his fodder. His wheat looks well, and altogether the committee thought no farm in the county had shown greater improvement than Mr. Hays' during the six years he has farmed it. The committee also referred to the fact that Mr. Hays' stables are supplied with Judge Watters' patent cattle fasteners.

The question selected by Mr. Hays for discussion was: "From which can farmers derive the greater profit—canning or raising tobacco; at the same time increasing the fertility of their land?" Our report is taken from the *Aegis*.

Wm. F. Hays said he would choose tobacco, because there is more money in it, and you can increase the fertility of the land, while raising it, which you cannot do in canning. To grow tobacco you must fertilize heavily. It will cost, he thought, \$100 an acre to raise, and the yield would be perhaps 2,000 lbs. If well handled it will bring from 15 to 30 cents per lb. The proceeds would therefore be from \$300 to \$400. Tomatoes would cost \$50 per acre to grow, and 400 bushels might be raised, which at say 25 cents per bushel, would leave a profit of only \$50 per acre, against from \$200 to \$300 from tobacco. He thought farmers should manufacture their tobacco as well as raise it.

John G. Rouse supposed it would cost more to situate yourself properly to manufacture tobacco, than it would to can, and it would be more difficult to obtain suitable labor, as well as to find a profitable sale for the manufactured tobacco.

Dr. W. W. Virdin said he had had some experience in raising tobacco, but none in raising tomatoes. If tobacco is properly handled it will pay better than anything you can put in the ground. There is no question that you can improve land while raising tobacco. You can get your crop in the house by the middle of August, and can then plow the ground, or if not too dry, immediately drill in your wheat. He had a field of four acres in tobacco for two successive years. It was followed by wheat, the crop being the largest ever raised on the place. The clover, also, was large. It is an established fact that we can raise tobacco in Harford of as good quality as they can in Pennsylvania. What we want, however, is minute care from the very beginning of the plant-bed to the stripping. For instance, in stripping, the leaves should be assorted to even length, and of one color. No leaf about which there is any doubt should be put among the firsts or seconds. One experienced hand can strip 200 lbs. per day. The average yield in Pennsylvania is 1,500 lbs., and his average yield has been fully as large. His experience is that \$100 per acre can be netted on tobacco. He mentioned a new enemy which had attacked his crop last season—a particularly voracious flea. He had one acre on which he raised 1,723 lbs., which, on account of being flea-bitten, was sold at only 9 cents per lb., yielding \$155. One man can attend to two acres, and about 3½ months of his time will be occupied in preparation of the ground, culture, stripping and housing. In ordinary seasons, in two months after setting out the plants the tobacco can be cut. Let it remain until it wilts. He sometimes scaffolds it in the field, where it can remain safely several days. One advantage of this plan is that you can get more of it in the house.

Dr. Virdin believed growing tobacco more profitable than canning, and thought the fertility of land can be kept up, which cannot be done while canning. Stable manure is the best fertilizer. He applies it in the spring; then pulverizes the ground as thoroughly as possible; throws it up in ridges, and sets the plants 28 inches apart. Start the seed bed as soon as the ground is dry enough to work. Some use hot beds, but plants can be grown early enough in the open air, and are stronger and better. Pulverize the ground and use guano or fine stable manure. Sow the seed and cover with hog hair thickly. Then put cedar boughs over the bed. Water the bed every evening, after the plants show themselves, with liquid manure, made by suspending a bag containing hen manure in a barrel of water. Some protect the young plants by shading them with a sheet. The principal enemy is the tobacco worm. In Pennsylvania they kill the hornblower (the moth which lays the egg from which the tobacco worm is hatched), by poisoning the flowers of the Jamestown weed, with a solution of arsenic. There are also traps by which the moths can be caught. Dr. Virdin called the attention of the club to the nature of the tobacco inspection laws, under which a farmer cannot sell his crop unless it is first taken to Baltimore and inspected. If the law were repealed farmers could sell their crops to better advantage.

R. John Rogers and B. H. Barnes preferred tobacco, as requiring less land than canning crops.

James Lee and S. M. Lee said canning deteriorated land; and the latter and James H. Ball deprecated the growing of tobacco as a useless product and injurious to the land; and Thos. A. Hays and Charles Coale inclined to tobacco.

John Moores said a farmer with 100 acres of rich land might raise 4 or 5 acres of tobacco with profit, especially if he is feeding stock and making manure. The Pennsylvanians who have made money raising tobacco have been principally graziers. The want of success in Maryland many years ago



was because they had no artificial fertilizers, and no manures to make tobacco with, and the farms became poor. In canning you must have a certain number of acres to produce enough to keep your force employed, and the constant plowing wears out the farms.

Harry Wilson said we ought to have mixed husbandry and not apply ourselves to one thing only. He thought we could raise tobacco to profit better than tomatoes, because you can make double the money on a small piece of tobacco than in tomatoes. If we were to put all of our land in tomatoes it would soon be washed into Deer Creek.

A desultory discussion then took place as to the relative merits of Maryland and Pennsylvania lands. Mr. Wilson thought the Eastern Shore is fifty years behind Harford county in farming, and the latter fifty years behind Chester county, Pa., in growing tobacco, feeding cattle, and raising big crops of timothy. We have as good land as Lancaster and Chester counties, but we don't farm it as well. Mr. Castner did not agree with Mr. Wilson, and said Harford county could boast of as good farmers as there are in the United States, and that the best farms of Lancaster county would not average as much as the best farms of Harford. Mr. Archer cited Mr. Wm. Woolsey's farm as better than any farm in the counties named.

W. D. Lee thought it depended upon how a man is situated whether he goes into one or the other. He would not think of canning on Deer Creek lands, where the soil will wash by constant plowing. He was rather in favor of tobacco here. In the Neck or near a railroad he would prefer canning, for which there is yet room.

Wm. Munnikhuyzen thought Deer Creek farmers could raise tobacco profitably without exhausting the rest of the farm. Men who stable cattle could do no better than to raise a few acres of tobacco every year. They could use commercial fertilizers on their grain crops, apply the stable manure to tobacco and keep their farms good. In canning you must plow too much land. On level land it might be followed with profit, but Deer Creek lands will not stand it.

In reply to a question by Mr. Wilson, Dr. Virdin said that the best tobacco is raised on loose soil. As to increase in production there are only certain districts where the finest tobacco can be grown, and that Harford, it has been shown, was one of those districts.

#### A DOG LAW WANTED.

The Club then drifted into the discussion of a dog law. Mr. Thomas A. Hays advocated the taxation of dogs. Mr. Moore was in favor of taxing only female dogs. Mr. S. M. Lee would make dogs property, and the owner responsible for all damage they may do.

Resolutions were adopted favoring the abolition of compulsory inspection of tobacco in Maryland, and expressing the deep regret of the Club at the death of Wm. F. Pannell, one of its honorary members, and who had done much to elevate and dignify the farmers' calling.

The Club then adjourned to meet at Mr. Wm. W. Castner's, on Saturday, February 4th. Subject—"Does the use of chemical fertilizers pay the farmer?"

#### Action of Nitrogen in Manures.

In the *Country Gentleman* we find a communication from Mr. J. B. Lawes of England, on this subject, which has a special interest for our readers in connection with the recent contribution to *THE AMERICAN FARMER*, by A. P. S. It is to inquiries from the same writer that Mr. Lawes is replying.

The views of A. P. S. in this relation have always been antagonized by us, as our readers know; but we gave him the opportunity of presenting his side of the question, that a free discussion might evoke the truth.

The facts which Mr. Lawes presents so clearly and logically it will be seen weigh strongly, if not conclusively, against the theories of A. P. S. Mr. Lawes says:

"The question he asks is as follows: 'Is the action due to the nitrogen of the salt, or may not the action be due to its property of dissolving the mineral matter and diffusing the same through the soil?' Without answering this question in a dogmatic manner, I will place before your readers the evidence bearing upon the question, which we have obtained from some of our experiments at Rothamsted, and they will then be able to decide for themselves how far the conclusions to which they may come are in accordance with those I hold.

In the field where we have grown wheat every year, the crops on the experimental plot, which has received no manure for 40 years, and on that which has received a liberal supply of all the necessary minerals, but no nitrogen, are about identical; the most observant eye would hardly detect any difference while they are growing, and the result when threshed out is about 13 bushels per acre.

A produce of 13 bushels appears to be something like the average crop of the States; it will be seen, further on, that the limit to the amount of the produce on our experimental plot under minerals is due to the absence of nitrogen; and as the processes which are going on in the soil at Rothamsted, must be somewhat similar to those going on where an almost identical crop is grown in the States, a description of them cannot be otherwise than interesting and instructive.

At Rothamsted, in our field under wheat experiment, very careful estimates are made of the nitrogen which passes through the soil in the drainage waters, and it is found so very large a proportion of this nitrogen exists in the form of nitric acid, that our analyses are confined to this substance alone.

The amount of nitrogen removed in the crops of corn and straw grown on the unmanured, and the mineral-manured plots respectively, is from 14 to 16 pounds per acre; and we estimate that rather less than that amount, say 12 to 14 pounds, passes away in the drains. In the rainfall about 7 or 8 pounds of nitrogen in the form of ammonia, is deposited on an acre annually. We have therefore about 31 pounds per acre carried off in the crop and drainage, as compared with 7 or 8 pounds supplied by the rainfall; this leaves about 24 pounds to be furnished by the soil and atmosphere.

The seed which is sown at the end of October produces but little visible growth until the end of April, and early in July the crop ceases to take much food from the soil; it is evident, therefore, that for nearly four months the wheat is absent from the land, and for five or six more months its capacity for taking up nitric acid is limited. Under such conditions it is a matter of surprise that so little, rather than so much nitric acid should escape into the drains.

The addition of nitrogen in the form of salts of ammonia, or nitrate of soda, to the minerals referred to in the last experiment, will increase the produce from 13 to between 30 and 40 bushels per acre; and in proportion to the increase in the crop, so will be the increase in the nitrogen it contains, as we find that whether the crop be large or small, the percentage of nitrogen in the whole produce (straw or corn) is much the same.

Thus far we have arrived at the fact that a large increase of growth has taken place by the employment of nitrogen, and that a proportional amount of nitrogen has entered into the crop. To this I may add that the drainage water from the experiments where ammonia or nitrates have been applied, contains very much larger quantities of nitric acid than the water coming from the land which has received no application of nitrogen.

The amount of nitrogen lost to vegetation will depend very much upon the amount of rain passing through the drains soon after the application of the manures; it may amount to 30, 40 or 50 pounds per acre, or under very unfavorable conditions the loss may be even greater. We have in this fact a complete explanation why those of our farmers who cultivate their land the highest have been the chief sufferers during the past six or seven years of excessive rainfalls.

With an increase of nitrogen in the larger crops, grown by an application of that substance, larger amounts of mineral matter have also been taken up.

This brings us to the question: How are we to account for the fact that these minerals were only taken up where nitrogen was used?

Was it because the plants could not dissolve the minerals without the aid of nitrogen, and that had they been able to dissolve them, they could then have provided themselves with nitrogen; or was it the case that they were perfectly competent, and in fact, did dissolve the minerals, but that their growth was arrested because they could not provide themselves with nitrogen.

We must seek for the answer to this question in the amount of mineral matter which the crops of the two experiments are capable of obtaining.

In looking over the long series of results obtained by burning the corn and straw of the crops grown in the various experiments, there is no fact which comes out more clearly and distinctly than this: that the crops grown by minerals alone show a much higher percentage of mineral matter than the crops grown by the same minerals with the addition of nitrogen. This is more especially marked in the straw, where the excess may amount to two or even three per cent.

We find that the crop grown by minerals alone has not only been capable of taking up mineral matter from the soil, but that it has taken up more than it can make use of, for want of the necessary nitrogen.

When we apply sulphate and muriate of ammonia, or nitrate of soda to our soils, and find as the result of such application, that the drainage water contains large amounts of nitrate of lime, it is evident that some considerable changes must be taking place in the soil, and that where an acid is liberated from a salt of ammonia, these changes must differ very much from those which take place where an alkali is liberated from nitric acid.

I think we have evidence that the soda liberated from nitrate of soda has a considerable decomposing effect upon the soil, but at the same time the almost complete absence of potash or phosphoric acid in the drainage waters is rather against the idea of a solution of these substances being effected by means of salts containing nitrogen.

With regard to the remark of A. P. S. that my 'claim is for inorganic nitrogen in a fixed soluble salt,' I am afraid that I cannot accept the limitation.

For the purpose of experiment, and in order to ascertain the relative importance of the various ingredients which are found in ordinary manures, pure chemicals salts are of immense value. But there is nothing to say against blood, flesh, or even leather, except that as time is of value, if it takes half a century to convert the nitrogen of an old shoe into nitric acid, the purchaser cannot afford to pay the same price for nitrogen in this condition, as for that which is ready formed in nitric acid."

Silk worms' eggs from Japan are now shipped to Italy by way of San Francisco, the Pacific railroads and New York, instead of via India, Suez Canal and the Mediterranean. Three car loads of eggs, containing 7,500,000 eggs, valued at \$250,000 came through in one day recently.

#### An Agricultural Paradise.

[From our French Correspondent.]

Attention is being drawn to Egypt as a country admirably suited for agricultural emigration. Despite the bad administration of the country, the advantages are many and real. In point of climate it would be perfection for the farmer. It never rains, hails, snows or freezes. The water necessary for irrigation is stored in reservoirs and distributed by canals; so the cultivator can have the equivalent of rain when he pleases. The Nile marks the limit of fertility; where its waters reach not there the desert commences. The soil is in great part derived from the sediment of the Nile. It is relatively deep, and by a little amelioration in tilling could be made to yield three times more than at present. Hand-labor is abundant, and costs only half a franc per day and no food. Land can be bought out for 500 francs an acre, and farming pays about 5 to 6 per cent. on capital. The system of cultivation is simple. When the Nile commences to rise, in the middle of June, rice or maize, etc., is sown; in autumn, wheat, beans or clover; and in March, cotton or cane sugar. Agricultural operations can be effected at all seasons, since there are no meteorological drawbacks. No manure is employed, for the natives dry the excrement of animals for the purposes of fuel. The same kind of plow is employed to-day as in the time of the Shepherd Kings, say eight thousand years ago. The soil is scratched to the depth of two inches; the plow is drawn by two bullocks or a camel and an ass. No care is observed in the selection of sowing seeds. The grain is never cut until it commences to self-shell; consequently threshing operations are easily conducted. The latter are effected in two manners—by a kind of roller armed with knife-teeth when the grain is intended for human consumption and exportation; the second consists in trampling it under the feet of oxen, where the excrement of the animals also mingles.

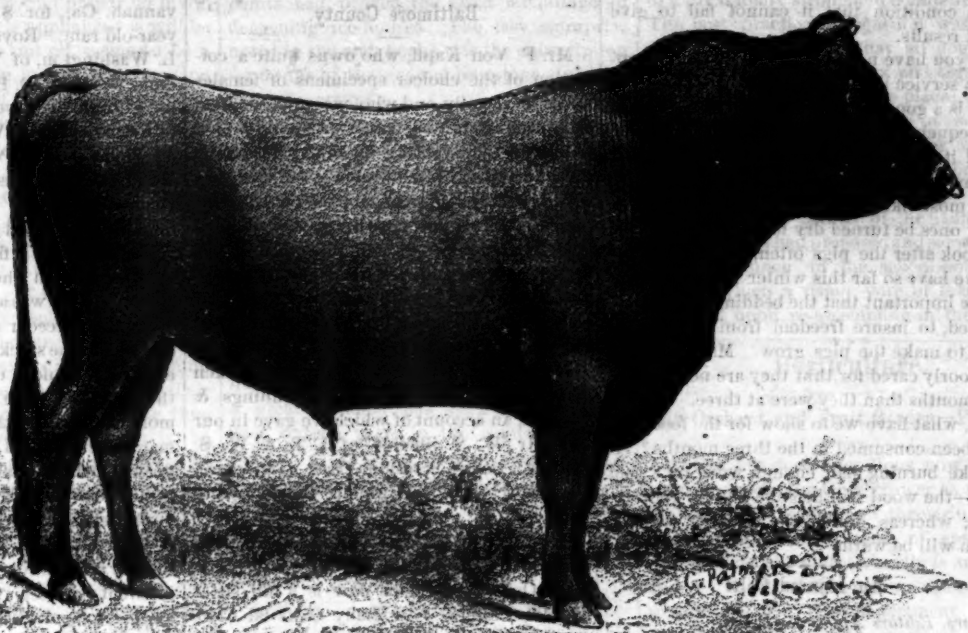
Cotton is the most profitable product to cultivate, but it is very exhaustive because none of it is ever restored to the soil. The fibre and the oil are not exhausting products, but the seed or cake, which contains the fertilizing soil elements, are also exported to other countries for cattle-feeding. Mulberry trees could be grafted and so produce food for silkworms, while the vine could be made to yield fruit capitally suited for raisins, and hence meet the want now much felt in the manufacture of wine.

Every domestic animal has degenerated in Egypt save the ass, owing to want of adequate food, suitable care and healthful conditions. Green fodder is much needed in the warm weather, and trench-preserved food would admirably fill the void. Ordinarily there is not more than one head of cattle for every thirty acres, while in farming districts in other lands one beast is estimated for two to three acres. The drawback is the taxation, which amounts to about one fourth of the total revenue of the land. Some holdings, and where the soil is of identical quality, pay four times higher taxation than the others. But this is the result of maladministration.

Paris, December 31, 1881.

A convention of the tobacco growers of Prince George's county, Md., was held at Upper Marlboro' on January 28th, for the purpose of giving voice to the sentiments of that community upon the question of the compulsory inspection of tobacco. As in a less numerously attended convention of the week previous, the almost unanimous opinion was in favor of the abolition of the present system of inspection, and resolutions were adopted calling upon the representatives of the county in the State Legislature to urge the repeal of the tobacco inspection laws.





"Cash Boy"  
2248

#### Jersey Bull Cash Boy.

Our illustration of this issue is a well-made photo-engraving of the celebrated Jersey bull "Cash Boy" 2248, by Cecil Palmer, Esq. This is the bull several times referred to in our late issues as the one to which the choice cows of the herds of Messrs. Clarke & Jones, J. E. Phillips and T. Alex. Seth were sent for service. While he is not a Maryland Jersey, he is so closely connected in blood to many of our best, that we feel no apology is necessary for giving currency to his portrait.

He is owned by Messrs. Hoover & Co., of Columbus, Ohio, who have one of the finest herds of the west, and he heads this herd. He is a son of the great "Rex" 1330, out of "Dido of Middlefield," who is a half sister of "Rex," being by "Colt Jr." 825, who was the grandsire of "Arawana Buttercup," whose picture we lately published.

The picture gives a good idea of his noble carriage and many of his fine points, but much is lost by the inability in such a pic-

ture to give his remarkable color and finely developed escutcheon. The list of prizes which this bull has won in the show ring at the great western fairs this season probably speak more for his great beauty and worth than the picture. At the Ohio State Fair of 1879 he won the first prize, as he did also the same year at the Northern Ohio and Dark County, Ohio, Fairs, and was at the head of the first prize herd at these fairs. In 1881, at the Ohio State Fair, he won second prize and was at the head of the first prize herd. At Minneapolis he was at the head of the first prize herd, and also at the head of the second prize herd for grand dairy prize of \$1,000, nine herds competing. "At Chicago he was at the head of the first prize herd, and won first for bull and five of his get; also won first grand dairy prize in bull class, \$500 and gold medal, \$100. At Peoria he won first prize, beating his sire "Rex," and at St. Louis won second prize but afterwards took the sweepstakes for bulls in same show, and was at the head of first prize

herd. We have but little to say in addition to this list of prizes, except that his blood on the side of his dam is about as remarkable as that of his sire. His dam, "Dido of Middlefield," being a truly great cow, and his granddam, "Belle of Middlefield," about as good. Messrs. John E. Phillips and Frederick Von Kapff each own a full sister of his, and it is not doing any disparagement to the other good ones of their herds to say that these (sisters) are among the best. Indeed, these cows referred to, "Princess Lily" and "Princess Gentian," are probably as good for any purpose as any in our many fine Maryland herds.

Cash Boy is to be sold at Messrs. Hoover's sale in Indianapolis in March, his owners having purchased Easter Boy, by Rex, out of Easter Flower, a full sister of Rex, to take his place in their herd. The Baltimore Co. cows, Dido of Middlefield, Arawana Queen, Arawana Buttercup and Rival's Jewel, which were sent to Cash Boy for service, have returned, and it is hoped are in calf.

#### Jersey Bull Rex 1330.

A correspondent of the *Country Gentleman*, who signs himself "L. B." says:

"This celebrated bull was recently added to the Simpson herd at a cost of \$3,500, and has been transferred from Ohio to his future abode, the Simpson Homestead, West Farms, New York City. About a year ago Mr. William Simpson commissioned the writer to select for him a bull which would make the most suitable out-cross for his rapidly increasing *Alphea* family (Italics ours). With this purpose in view, a tour of inspection followed, and every first class herd of Jerseys in America, England, the Island of Jersey and France was visited and a careful examination made of the get of every noted bull. As a result, the choice fell upon Rex 1330, not alone on account of his individual merit, but because extended research proved him to be the sire of a greater number of sons and daughters of marked superiority than any other Jersey bull now living, (Mercury 439 alone excepted). It is entirely safe to state that no Jersey bull in the world is competent to score as many points of excellence as Rex 1330. With all the fancy points, he combines a form which is simply perfect, a skin exceedingly thin, mellow, and of the richest color, and above all, the most wonderful escutcheon ever found upon any Jersey bull, etc."

We are glad to be able to publish this confirmation of the excellence of this bull, which we have so often asserted in these columns, because of the great number of animals of this family which are owned in Baltimore county. Our readers will remember the great number of times during the past year we have urged the excellence of the Rex

blood, which is a combination of Splendid 2 and Albert 44. It will be remembered that in your issue of October last you published tables compiled by Mr. T. Alex. Seth, of Baltimore county, showing that out of 110 animals reported to have made as much as 14 pounds of butter per week, 20 traced to Splendid and 10 to Albert, and it must not be forgotten that these same tables showed that 24 animals traced to Pansy 8 and 18 animals to McClellan 25, while only 14 traced to Jupiter and his sister Alphea combined. We mention this because we take issue with "L. B." if he means Rex is the best sire that has lately lived in this country. It will be noticed, however, that he says, "now living," while he probably knew that Champion of America died a few weeks since.

Champion of America was the best representative of the Pansy-McClellan-Splendid blood, the three animals which take the lead in the tables referred to, and if the \$3,500 which was paid for Rex is to be taken as indicative of his worth, we must not forget that \$5,000 was offered and refused for Champion of America when an older bull than Rex. We are glad to say that it seems that the plan of breeding adopted by our county breeders, or some of them, at least, such as Mr. Phillips, Mr. Von Kapff, Mr. Clarke, Mr. Banks and Mr. Seth, is to cross the Rex and Pansy families, and we think no better line of breeding could be adopted. In a private letter from Major Campbell Brown of some weeks ago, and which we

have been permitted to see, he said that so far as he had then gone in compiling his proposed tables, the Pansys and Alberts stood ahead, and that he rarely found a Pansy without an Albert out-cross, and *vice versa*.

What does the purchase of Rex by Mr. Simpson mean, and how many breeders did "L. B." expect to deceive when he inserted the words in brackets (Mercury alone excepted)? The preface to the Simpson catalogue for 1881 contains this language: "Pure Alpheas would have soon become extinct had I not gathered them together again. \* \* \* The Alphea family have been in-bred sufficiently to prove that they can stand it without deteriorating, and it is my intention to continue in-breeding them. I predict that this strain of blood is destined to prove to the Jersey cattle interest what the entirely in-and-in bred Duchess blood is to the Shorthorn interest." And in the writings of other admirers of the Alphea it was distinctly stated that it was the purpose to maintain the blood pure from which males could be obtained to use as improving crosses in other herds—as with the Duchess Shorthorns. What is the reason of this radical change of base? Why was it found desirable to select a bull "which would make the most suitable out cross" for the Alphea, which were collected at great cost in order that they might be maintained pure without a cross? These are questions which it is not our province to answer, much as we may applaud the change of places. X.

#### Sheep—Their Profits and Management.

Having been in receipt of and regularly perused *THE AMERICAN FARMER* for the last year, and feeling myself indebted to its columns for both gratification and profitable information, I desire to contribute some notes of my experience in raising sheep, in return for the many valuable hints that I have derived from your thoroughly agricultural journal.

In the year 1870, about the middle of October, I purchased at the Georgetown drove-yard, ten ewes in lamb, of the ordinary cross, Cotswold and Southdown, at four dollars each. I chose the sheep as nearly as I could from rules established in my mind through conversations with Mr. Thomas Kelley, of this county, than whom there are few men more intelligently informed on all matters of practical value connected with sheep. I bought compact frames, broad rumps, short legs, long wool, and from two to three years old by the positive criterion of the teeth. These ewes produced the following spring twelve lambs and fifty pounds of wool, the actual profit of which produce was fifty-three dollars. The pecuniary value of the provender consumed by these sheep in that time was unworthy of computation. I therefore regard the gain as 100 percent. of clear profit. This is about the average of my profits from sheep from that time to this in money, besides which, I have frequently used mutton and lamb from my flock for my table. The fall one year after my purchase I was at the drove-yard, and purchased for \$6.50 a fine yearling buck, deep in the South-down blood. From this purchase I secured a most choice lot of lambs the following spring, and from them I reserved five beautiful ewes that partook of the nature of their sire in the most conspicuous manner. I have changed my buck every year with the view to preventing the possibility of interbreeding or intercourse between sire and offspring. I have never been fortunate enough

to secure a high-bred sheep since the first buck I bought, and hence have never had so decided improvement in the flock, the main enhancement in value of my sheep coming through that connection. If I had availed myself of the advantage of breeding from improved bucks and had escaped depredations from dogs, I am confident I could have made my sheep interest yield 300 per cent. profit at least, by selling most of the lambs for breeding purposes, and by my system of raising early lambs. I have never lost a sheep by dogs, though my neighbors have met with great loss, and in one instance, at least, a neighbor has been compelled by his frequent losses to abandon this otherwise profitable and agreeable branch of farming. I have been in such constant fear of this source of damage, however, that I have been afraid to put any considerable amount of money in a buck, and hence have never realized the full advantages of raising sheep. I would like to extend my notes, but as I am already infringing upon the limits allowed in an article of this nature, I will endeavor to consider as far as practicable my observations.

One of the most important advantages of sheep farming is the fact that it is a very certain source of revenue at a season when every other source has been drained. Another great advantage is the facility it affords of furnishing the most wholesome fresh meat upon our tables at a trifling cost to the farmer. Another is the great amount of valuable manure they make when properly managed; and lastly, the small pecuniary cost of keeping them and their peculiar nature of subsisting in a great degree by eradicating obnoxious vegetation from the land. I have never been able to devise any rational method of protecting sheep from dogs, except by keeping my land posted against gunners and not keeping any dogs myself; and this is not of my invention, but arises



simply from my not having any particular fancy for dogs and my not being able to see any profit in them. I would rather lose any property that a dog could protect me in the possession of than have any member of my family, or any one else, bitten by a rabid dog belonging to me, and of this there is always danger.

Sheep require no shelter or protection from any sort of weather except cold rains and sleet. They should never be housed or confined in a small enclosure. A cover for them to go under in rains or sleet near the cattle yard, that they may occupy or not at will, is the only desirable shelter, as it is their nature to bear great exposure, for which they are provided perhaps with a greater degree of animal or electric heat than any other animal of a domestic nature. I change the nature of my buck lambs as soon as they become strong enough to frisk around, and I never lose one from this cause. As soon as possible, I begin to feed my lambs upon meal, separating them from the sheep by means of a little gap in the kitchen picket large enough for the lambs to pass through and too small to permit the passage of the sheep. Their natural inquisitiveness induces the lambs to come through this little gap, when the meal is placed within their reach. I place the buck with my sheep about the first of August and withdraw him for the butcher about Christmas. The mean period with a ewe is one hundred and fifty-four days, which brings the lambs about the first of January. I allow my first buck lamb to escape treatment, and keep him until I am sure of getting a buck from some other flock, when I dispose of him to the butcher or to some one for breeding purposes. I have a great fancy for black ewes, and have several in my flock of sheep. They are always in better condition, have heavier fleeces, raise more lambs, are less timid, and as far as I can discover, their mutton is as good as that of white sheep. I always reserve promising black ewe lambs. The above is my actual experience, and I hope it may offer both entertainment and profit to your readers who are interested in sheep husbandry.

RUDOLPH WATKINS.

Montgomery County, Md., Jan. 1882.

#### Live Stock—February.

By far the most important department of farm labor during the winter is the care of the stock. Dairy cows particularly need constant care and attention, so that they may be kept up to a full flow of milk. The old and unprofitable cows should be at once disposed of, either by sending to your nearest market to be sold to the sausage butcher for what they will fetch, or if too far gone to pay the cost of transportation, save the skin, and cook what little flesh there is that can be utilized for food for hogs; or by giving it to the poultry it will increase the supply of eggs at this scarce season of the year.

It should be a fixed rule not to attempt to make good beef out of your old, worn-out cows and oxen. It surely will not pay as well as to give the same amount of food to young and growing stock.

The cows that are to be kept as the source of next year's income should be provided with good, warm shelter, and fed not merely to keep them alive, but more than that. They must have enough of good and nutritious food, or the animal machinery will be so reduced that a large part of the season will be passed before it is in good working order, so as to yield a fair profit on the outlay in stock and food.

Care should be exercised daily that no animal is allowed to injure another. A small outlay in brass knobs, to put on the horns of all the mature cattle, will add much to the looks of the herd and more to the comfort of the weaker members. Watchfulness and care in small things is one great cause of the

farmer's success in having nice stock, and in such condition that it cannot fail to give good results.

If you have not been in the habit of keeping a service list of all the cows on the farm, now is a good time to begin. Then consult it frequently, so that your good cows who need it most get at least two months' rest before they are due to calve; otherwise they will most likely be milked too long and the poor ones be turned dry too soon.

Look after the pigs often, as so much wet as we have so far this winter makes it much more important that the bedding be often renewed, to insure freedom from mange and also to make the pigs grow. Many pigs are so poorly cared for that they are no larger at six months than they were at three. In that case, what have we to show for the food that has been consumed in the three months? It is like burning half enough wood on a cold day—the wood will be gone and no good result; whereas, double the quantity and the room will be warm.

#### An Injured Colt.

Messrs. Editors American Farmer:

Please advise me, through THE AMERICAN FARMER, how to treat a colt that had his left hind leg injured, about one month ago, by being backed over a stump while geared to the wagon. The injury is between the knee and pastern, on the outside, and causes the leg to remain swollen considerably at this point. The leg was slightly cut at two or three places on the inside and back part, between the knee and pastern, but so slightly as to need no treatment. About midway between the knee and pastern, on the outside of the leg, the appearance of a swelling similar to a wind-gall was the first evidence of any injury on that side of the leg. The swelling increased after a week or ten days, going both upward and downward, extending from knee to pastern. The affected parts were bathed for a few days in weak lye without producing any change. Jadwin's liniment was next applied, three times a day for three or four days, with same results. When the colt is used or exercised the swelling diminishes some, but does not leave entirely, and standing in the stall over night brings it back as before. The animal shows no sign of pain by limping or otherwise, and there does not seem to be much fever in the affected parts. Advice through the Veterinary Department of THE FARMER as to its proper treatment and cure will greatly oblige.

J. W. K.

Caroline County, Md.

#### REPLY.

As this case is deserving of special interest and attention, I will first explain its nature and then give instructions for treatment. I consider that the colt suffers from partial rupture of the sheath of the back tendons—in horse language termed "breakdown." Considering the age of the animal injured, I think it possible to greatly alleviate this weakness, if not to effect an entire cure. I would recommend the following treatment: Put the colt in a good box stall, large enough for him to walk around in. Bathe the leg with warm water, once a day for seven days, after each application applying the following solution:

Tincture arnica, 2 ounces; tincture aconite root, 1 ounce; oil of origanum, 2 drachms; distilled water, 1 pint.

After this treatment has been pursued for the above mentioned length of time, clip off the hair over the swelling and apply this blister:

Biniolide of mercury, 1 drachm; oil of origanum, 1 drachm; lard, 1 ounce.

Be careful to tie the horse's head up for twenty-four hours after the application of the blister, and repeat the application in two weeks if necessary.

R. P. LORD, M. R. C. V. S. L.

156 Pennsylvania Avenue, Baltimore.

#### Recent Purchases and Sales of Jerseys in Baltimore County.

Mr. F. Von Kapff, who owns quite a collection of the choicer specimens of females of the Rex family, and who, we supposed, had all of this celebrated family, (a family which is rapidly supplanting all others in public favor) to which one breeder is entitled, has recently returned from Connecticut, where he purchased two fine daughters of Cash Boy 2248, who our readers will recollect is a son of Rex, out of his half sister Dido of Middlefield, and whose picture and show record we publish in this issue (See letter of "X" on the Rex blood elsewhere in this issue).

Besides the 55 head of Jerseys lately taken from our county by Messrs. Jennings & Hoover, an account of which we gave in our last, Mr. W. S. Shields, of J. T. & W. S. Shields, Bean's Station, East Tennessee, have purchased in Baltimore the following Jerseys:

From Mr. Jno. E. Phillips, Lady Oaks 8d 6304, by Imp. Baltimore Boy 837; dam, Imp. Lady Oaks 2081. This cow is a full sister to Mr. Phillips' cow Lady Oaks 2d 5246, that made a record of 15 lbs. 2 ozs. last year, and a member of Mr. Phillips' prize herd at the State Fair in October. Ruby of Oakland 6634, by Imp. Baltimore Boy 837, dam Clarice 2d 5282, a cow that milks 17 quarts per day. They also purchased from Mr. Phillips five heifer calves, by Alroy 3212, out of good cows, one of them being out of Mr. Phillips' prize heifer Placida 2d 11098; and from Mr. Phillips' cow Lady Oaks 2d, mentioned above, they take a handsome solid colored bull calf, by Alroy 3212. From Mr. Jas. W. Tyson, they purchased three very handsome and rich cows, viz: Bernhart 11088, Elsie's Nan 6203 and Omeda 7289, all in calf; and from Mr. Jesse Tyson, Poinsettia 9064 and Flighty 9920, these being two of Mr. Tyson's very best cows. From Messrs. Clarke & Jones, the heifer Sparkling Eyes, by Alroy 3212, dam Lady Sparkle 10572.

The Messrs. Shields have quite a choice herd at home of fine Jerseys, comprising much of the blood of Niobe 99, Europa 121, (a grand old cow in breeding), Mercury 432, Echo 81, Lawrence 61, Lady Mary 1148, Oak Leaf 769 and Pansy 8. They are determined to have one of the finest herds in the south, and to that end (and very judiciously in our mind) they endeavored to secure the refusal of the calf of Mr. Seth's prize cow Arawana Buttercup 6352, if a bull, offering for it, in that case, \$500. This calf, when it comes, will be by Cash Boy, the son of Rex, out of one of the prize cows of Maryland, Dido of Middlefield, and will therefore possess a rare combination of choice blood. It would be a shame to allow this calf, if a bull, to leave Maryland, and if our breeders showed the same energy and foresight to possess themselves of good males that they have as to females, he would not be permitted to go. We wish Mr. Shields every good fortune with his herd, and we would be pleased at any time to hear from it and what it is doing.

#### Sales of Cotswolds.

I herewith enclose for publication in your widely circulated journal, recent sales of Cotswold sheep that I have made, which were effected in due proportion through advertising in your journal. I find trade good for good stock, and had it not been for the excessive drouth of the last season, which cut pasturage short, I should have made still greater efforts to have effected sales. I am however pleased to make the following report: Sold one ram lamb to J. T. Ballenger, St. Mary's County, for \$25; one yearling ram to Samuel Ringgold, Kent Island, for \$45; two ewes to S. G. Boyd, of York, Pa., for \$50; one two-year-old ram to Wm. F. Ford, Maryland, for \$20; six yearling ewes

and one yearling ram to G. S. Owens, Savannah, Ga., for \$140; my imported two-year-old ram, "Royal Sherburne" to Col. W. L. Washington, of West Virginia, for \$125; one ewe to J. B. Brown, Centerville, Md., for \$17, and five ewes to J. Bowie Gray, Esq., of Fredericksburg, Va., a breeder of Registered Short-Horns, Poland-Chinas and Cotswold Sheep. These ewes were sired by Golden Locks and Duke of Gloucester, and in lamb by "Royal Sherburne."

Mr. Gray has a fine flock of ewes, which were bred from the flock of Col. Ware, of Virginia, who was acknowledged at one time as the best breeder in the United States. I can sell all the stock I raise and more too, and encourage a more extensive engagement in the business, as the country is large, and the more competition there is the more the demand increases. I have just added to my flock a prize winner at the Royal Agricultural Society, England, and he is the best ram lamb I ever saw, with a prospective fleece of 20 to 22 lbs. wool. We are anxiously awaiting the publication of the prize essays on the different subjects proposed by yourselves, and have no doubt but that greater interest will be manifested in the circulation of THE AMERICAN FARMER on account of the move. Yours truly, Ed. C. LEGG.

Kent Island, Md., Jan. 18th, 1882.

#### Bee Notes for February.

Doubtless the bees will require different management during February, in this and a more Southern latitude, from last season, and about the middle of the month, if the days are fine and the bees flying briskly, they should be examined, and all filth removed from the hives. If they are not strong enough to cover all their combs, put in the division board and confine them to only as many combs as they can cover well. Feeding should be commenced as soon as they begin to bring in the pollen. The very best feeder for this purpose is the covered block, or sluck feeder, used on the honey board, directly over the cluster of bees. Cut a slot in the honey board, from the centre, from side to side, about eight inches long by one inch wide; place two of the entrance feeders over this slot, and snug together so no heat from the bees can escape; over the holes in top of boxes lay a flat piece of tin or a piece of glass; cover with the mat and keep all tucked up snug, for the loss of heat is a corresponding loss of bees. Don't fail to keep all snug about the top of the hive.

Sugar syrup is the very best feed, and ten to twelve pounds of granulated, or best coffee sugar, to one gallon of water, will make it about right. As soon as the days get warm enough for the bees to fly briskly, put out the rye flour or buckwheat flour in some warm, sunny place where the bees can find it, and you will soon see them "load up." If placed in empty combs and laid in some sunny part of the yard, they will take it much faster. It must be taken indoors in rainy weather, or covered up.

If any queenless colonies are found, unite them with the weak ones. A queenless colony will seldom carry pollen early in the spring. Watch all colonies that carry none, and attend to them early or they will dwindle away.

This is an excellent time to make selections of stock for the coming season. Don't put it off too late; everything should be got in readiness beforehand. Many bee-keepers fail to get a crop of honey because of this neglect on their part. Every successful bee-keeper has his hives, sections, comb foundations, all in readiness for the season, and when the time comes he can easily give his bees what they require.

I cannot more forcibly express myself on this important subject than by quoting from an article from the able pen of Dr. J. P. H. Brown, in the Bee-keeper's Magazine for January, and it will apply to most localities this



month: "We can be busy laying our plans for the coming season, and preparing hives, honey boxes, and such appliances as will be needed. To defer, to put off, seems to be a weak (strong) point in human nature. One of the great sources of failure in bee-keeping is in not having things ready at the right time. We wait until our actual need is upon us; then we send off for bees, hives, queens, sections, extractors, etc., and expect them right away. Some hardly wait until the order has reached its destination, but write a postal card—'Why don't you send right along those things?' It is not the intent of this article to be any apology for that class of supply dealers who are constitutionally slow coaches and are dilatory in filling orders, but to urge bee-keepers to send their orders for supplies in advance of the time when they shall need the goods. It is the duty of every supply dealer to fill orders he receives with the utmost despatch, and we believe all those who have an eye to business do it; at least, they use their best endeavors."

The same writer adds: "When bees are rearing brood they consume their stores rapidly. Hence when you feed, either give it as fast as they will take it up until they get enough to last them until they can gather from the flowers, or feed in small quantities every other day until the middle of March. The results are about the same, and the first plan is less laborious. There is to be no 'half-way station' in this feeding business. To feed for a while and then quit and allow the bees to starve at last is indicative of unpardonable carelessness and bad management." C. H. L.

Sunny Side Apiary, Baltimore.

#### Montgomery County Farmers' Convention.

We gave in our last, a brief abstract of the proceedings of this body of progressive farmers. We have since received from the officers of the Convention a fuller account, accompanied with the reports of the several associations connected with the Convention, from which we make some extracts. (The local matters we omit.)

**SENIOR CLUB.**—The report of this Club, which is now in its 38th year, was read, from which we learn that there has been "no evidence of diminished interest, nor of falling spirit" during the past year—the average attendance of the members being 12, out of 14 members. The National Grange at its late meeting in Washington, avowed the confession that a mistake had been made in putting all their strength upon one main principle, which was co-operation. Important as that is, co-operation alone cannot build up a Grand National Institution in these United States of America. There is another principle and power needed. It is in and by education added to co-operation that the great work can be accomplished. It is indeed the truth that agriculture seriously lacks a system of education adapted to real needs. When such culture becomes the possession of farmers generally, we shall not hear complaints of the uncertainty and unreliability of their experience, nor of the disrespectful and contemptuous language now so commonly applied to our fraternity.

The members of the club are reported as being mostly opposed to sowing clover on the snow; nearly all agree that the right time to sow upon growing wheat is indicated by the cracked condition of the soil, whether that comes in February, March or April. In regard to ensilage, each appeared to wish that his neighbor would make a fair trial of it. Hedges are being more and more used. In the second year the advice was to cut off, and not bend over. Best fertilizers for potatoes is considered to be that known as Bond's \$40 per Ton. The best sheep pasture had not been plowed for 25 years. Millet seemed to be growing in favor last year. The question of a Dog Law coming up, it was stated that 800 sheep had been killed in a space of mod-

erate extent, within two years. Experiments had proved the great advantage of deepening ice-houses. The last enterprise noted in the club books was the subscription for 6 tons of the ground limestone, to come from Hagerstown.

#### CROP SUMMARY OF THE SENIOR CLUB.

	Acres.	per acre.
Wheat.....	240	18 bushels
Corn.....	254	8 barrels
Oats.....	40	28 bushels
Hay.....	281	1 ton
Potatoes.....	40	80 bushels
Hogs.....	111	170 lb head

**ENTERPRISE CLUB.**—This club is in its sixteenth summer, and is represented as sprightly as any belle at that age, although the minutes of 1881 show a slight falling off in attendance, the average being 104 members at each meeting. The report says that a great advance has been made in the past sixteen years in the comforts of our homes. A member of the Enterprise is hardly considered in good standing with us unless he has, within a year, either built a new house or added to his old one, bought a farm or two, or been elected to the Legislature.

Last spring the first silo in the county, yet reported, was built by a member of this Club. It was filled with rye and corn, and has worked satisfactorily.

The crack potato growers say that it will pay to plow land twice before planting. They claim that land thus treated will retain moisture better, and this is an essential of successful potato raising. Most members think it better to raise horses than mules. The best way to mark off corn or potato rows where the land is very rolling, is to run them with a slight fall around the hills, no matter how crooked they become. Then each furrow takes off its own water, and there can be no accumulation to produce an unsightly wash. The rule of one of our members, never to leave husked corn out in the field over night, if adhered to only in a measure, would have prevented many barrels of corn from being injured by excessive rains the past November.

#### CROP SUMMARY OF ENTERPRISE CLUB.

	Acres.	per acre.
Wheat.....	421	17½ bush.
Corn.....	307	61-10 bbl.
Oats.....	17	35 bush.
Hay.....	276	11-6 ton
Potatoes.....	81½	75½ bush.
Hogs.....	168	180 lb h'd.
Apples sold, 208 bbls. worth \$236.		
Butter.....		6075 lbs.
Cream.....		570 gals.

One member reports 3280 lbs. butter from 11 cows, 207 1-5 lbs. per cow.

**MONTGOMERY CLUB.**—During the year 1881 the Club has held fourteen meetings, with an average attendance of 14 out of 16 members. It is the custom to have at each meeting an essay written upon some agricultural subject appropriate to the season of the year. The mere fact of exchanging ideas seems to bring forth something that the attentive listener can learn from.

One of the most important discussions we have had during the season was "The extent of abortion among our dairy herds." So far we have failed to find a cause, much less a remedy, for the fearful disease that seems to be gradually and resistlessly spreading. The hay crop does not increase, owing partly to the mistake of grazing the land too close on our dairy farms, and the practice of selling too much off where we have not the stock to feed.

#### CROP SUMMARY OF MONTGOMERY CLUB.

	Acres.	per acre.
Wheat.....	500	18 bush.
Corn.....	410	7½ bbl.
Hay.....	190	1½ ton
Potatoes.....	104	88½ bush.
Butter sold, 13,750 lbs.		Cream, 2,398 gals.

In the general proceedings of the convention one of the questions discussed was the advantage of having a railroad passing through our farming community. It was agreed that to have a railroad pass through your neighbor's land would be a great benefit to the community. Another question "Can an effective and practicable law be devised for the protection of sheep from dogs." This

question, as usual, occasioned the expression of a great many strong and conflicting views. The best practical suggestion was that of Asa M. Stabler, viz.: that all dogs should be required to wear collars and tags, renewable each year, at a suitable place; all those found without such collars to be killed. Upon a motion, a committee was appointed to draft such a law as will meet the case, to be forwarded to our delegates.

At 12 M. a committee of the ladies of the neighborhood had prepared and served a most bountiful lunch in the school-house near by, for which a rising vote of thanks was tendered upon re-assembling in the Hall.

#### Horticulture.

##### The Orchard and Fruit Garden—February.

Active out-door operations now begin to loom up before the fruit grower as realities; the time for planning and theorizing for the closely approaching clash of spades and plows with old mother earth is well nigh ended. South of this, ere we again prepare suggestions for this department of THE AMERICAN FARMER, the work of planting, pruning, plowing, etc., can be pushed forward. In our own State these operations may possibly be impeded and delayed by unsuitable weather, though there will doubtless be some fine days which can be used to advantage in finishing up, planting, etc.

Old apple and other fruit trees with rough and shaggy bark can be improved in the appearance of their trunks by subjecting them to a good scraping with hoe, spade or other suitable implement. The winter quarters of many insects will, by this operation, be broken up and the insects destroyed. Of course, friends suffer alike with enemies, but as the enemies always seem to preponderate, we prefer to turn them out, and if we have no soap-lyes with which to wash the trunks after scraping, we resort to white-wash as the next best easily available remedy to render more complete the destruction of insect foes. As to the scraping and tearing away of the old and dead bark from the trees, we have seen it stated by reputable authority, that so far as the after condition of the tree thus treated was concerned, it was worse off without the old bark hanging around it than with it, on the theory that trees are protected by such bark from injury by sudden changes of weather, from the glare of the sun in summer, as also from the extreme cold of winter; and also that nature intended it for some wise purpose in her great economy, otherwise it would not be there. For our part, we have a great deal of confidence in nature, but then she clothes sheep, geese, etc. with outer coverings the same as she does trees, and if left to pursue her course with these, said coverings are shed little by little, the same as the shaggy outer coverings of the trees. Still the annual shearing to which the sheep are subjected does not seem to impair their health; rather the opposite, and gives it an appearance at once in harmony with the demands of the time. So with shaggy bark fruit trees; a good scraping and washing annually makes them presentable to the eyes of a progressive and thrifty orchardist.

Grafts for spring use can now be cut, and after carefully tying and marking, can be buried in the soil or stored away in moist sawdust or sand in a cool cellar, until wanted later in the season.

In the Fruit Garden, the planting of raspberries, blackberries, gooseberries, currants, etc., can be performed when the soil is not too wet. It don't pay to work the soil in a garden of any kind where it will not crumble and crush readily by the stroke of the spade or fork, and therefore, planting had better be delayed a few days in order to catch the ground in good friable condition. Strawberries can be planted after danger of

much freezing weather is past. The roots of these do not penetrate sufficiently deep to escape danger of the plants being "heaved out" or "thrown" by the frost if set too soon, without the additional labor of mulching. Grape, gooseberry and currant cuttings can be set out in rows, in accordance with instructions given heretofore. The coverings or winter protection of half-hardy trees or plants should not be removed until the certain and permanent arrival of spring weather.

Everything should be in order and in readiness for a vigorous prosecution of work when the proper time arrives; but should winter tarry and hesitate in his departure, it will prove injudicious to attempt to force him. Yet, on the whole, impatience is less pernicious to fruit growing than laziness—perhaps we should have said "a lack of energy," but we have got into the habit of calling persimmons—either American or Japanese—*persimmons*, instead of "Fruit of the Gods," owing, we suppose, to the fact that we don't wear our gloves when we are at work. Intelligent perseverance in fruit growing, as in other pursuits, is the key that invariably opens the gate which bars the road to success.

#### Norfolk (Va.) Pomological and Horticultural Society.

The annual meeting was held on January 14th, and the old officers were re-elected as follows: G. B. F. Leighton, President; General R. L. Page, Hon. J. B. Whitehead, Captain W. H. Murdaugh, Vice-Presidents; Joseph R. Spratley, Treasurer; J. Richard Lewellen, Secretary. Mr. Leighton delivered an address in which he said the potato bug had made its appearance the past season, but with the remedies at hand its progress had been arrested and little damage resulted from its depredations. Trucking crops suffered from the effects of drouth, but they were spared the severity that has visited many sections of this and other States. The valuable staple, corn, has nearly or quite reached an average crop in this lower Tidewater section.

In view of the extension of the trucking interest into North Carolina, induced by the new railroad to Elizabeth City, he recommended to truckers a reduction of market gardening products one-fourth, and substitute on their stiff soils grass for hay, and peanut culture of their light lands—the former as giving a partial rest to the soil from the constant strain upon it in the production of vegetables under the stimulants of commercial fertilizers, as well as a retainer of money at home; the latter as an improver of the soil (with the use of the special fertilizer, lime,) and at the same time giving a crop that can be held one or more years for market.

The peanut product has assumed an unexpected importance in the Tidewater section, and as the demand keeps fully up to the production, this diversion from trucking is worthy of special attention.

The point taken for the reduction of the trucks grows out of the fact that our transportation lines evidence an average annual increase of about eight per cent. on the previous year. This being in excess of the grow-ind demand North, if dropped to the market demands, we would find the business would be nearly restored to its former profit, this being the controlling centre of these products.

#### GROUND LIME.

Perhaps some of you noticed last year Professor Webster's reply to my note asking the relative value of ground oyster shell lime and lime from burned oyster shells. In corroboration of the Professor's views, will say that I addressed a note to Mr. Albert Dodge on the subject. He replies that he used what he could obtain, (only about one ton) on sweet potatoes. That he manured all the



rows, and on the portion he used the shell lime, the yield was from seventy-five to one hundred per cent. more than from the land treated in the same way without the shell lime. He used it at the rate of one ton to the acre. In a recent interview with the Professor he advanced the idea that it could be utilized as an excellent basis for fertilizers with the addition of phosphates, and other requisites, from which burned lime must be excluded.

#### Grape Planting.

As the season for planting is approaching, a few words may perhaps not come amiss in giving my experience to those thinking about planting for the market.

After trying different ways without much satisfaction, I have adopted the following, which, though not new, may suit the views of others as well as it has mine. Select a piece of good land where the water does not lie—land that has not been worked for a year or two. Plough in the fall if possible, in the spring cross-plough, then give a good dressing of raw bone, say about one thousand pounds to the acre. Cross-harrow the ground and lay the rows off eight feet each way, planting the vines in the cross. The ground between the vines can then be used for some other crop. The grapes thus have plenty of room to grow, and are easy to work, especially if the crop is all planted in hills.

Plant two-year-old plants if possible, shortening them in to about one foot at the time of planting; and if well worked the first year that is all that is required. The second spring, set a good stout chestnut or cedar post or pole alongside of each vine, trim your vine down to about eighteen inches and tie up to the pole. After the vines commence growing they ought to be trimmed off to two shoots. These require going over once or twice during the growing season and having a light tie given them to keep up the vines off the ground. Also if too much fruit shows, it ought to be thinned out, as strong vines are more the object this season than fruit. The third season, if the vines are properly attended to, they will produce a good crop of grapes; and the ground, if properly worked and manured, will in the same time have paid the expenses of working the grapes. The most paying varieties for market I have yet come across is the Concord, with a few Hartford Prolific for early ones, as they are ripe and gone by the time the Concord commences.

R. VINCENT, JR.

Baltimore County, Md.

#### Pleasure Grounds and Greenhouse.— February, 1882.

By W. D. BRACKENRIDGE, Florist and Nursery man, Govanstown, Baltimore Co., Md.

##### PLEASURE GROUNDS.

It is not every man who takes hold of gardening or farming, by which to earn a competent livelihood, that succeeds, and this lack of success may proceed from the absence of a proper training of the mind so as to comprehend the principles which underlie the proper treatment of different soils, causing them to return the most favorable results.

Some men get along very well after many years' experience entirely their own, while a neighbor whose faculties of observation and reflection are not so keen has all his efforts regulated by rote and not by reason. This ought not so to be, seeing that access can easily be had to periodical works, where both the practical and theoretical teachings on horticulture and agriculture form the leading theme, and which obtuse and unreflecting minded men should consult.

There are on the other hand some men who read little, but by being gifted with an impressive genius which stamps success on everything they touch, sometimes going so far as striving to overthrow the course of nature rather than act as her assistant.

We are frequently told that in order to make intelligent gardeners and farmers young men destined for either of these pursuits should be sent at an early age to some horticultural or agricultural school or college, to have the rudiments necessary afterwards to leave an indelible impression on their minds as future cultivators of the soil. Now we have been associated with many graduates from such schools destined for both professions, and we honestly confess that neither their practical nor theoretical knowledge exceeded that of such as had never been within the walls of one of these institutions.

By the above remarks it is not to be inferred that we condemn schools of the kind; they are in our estimation just the thing wanted for training up the young gardener and farmer, provided the proper kind of tuition is afforded, and time given the pupil to thoroughly comprehend the application of what he has been taught. But if a man has got a clear head and an undaunted spirit to succeed he will be greatly aided in his pursuits by taking lessons on chemistry, zoology and botany in some of our public schools, which would greatly assist any one in an intelligent cultivation of the soil, thus enabling him to know something of the constituent parts of the same; what kind of fertilizer it wants, and what kind of crop it is likely to sustain best. These last are problems which every gardener and farmer should study and put in practice on every available opportunity.

The present season of the year is somewhat unpropitious for carrying on any very extensive improvements belonging to the pleasure garden, but the industrious man will always find some kind of work which ought and can be done now, and be out of the way when a multitude of necessary jobs will be pressing him hard when spring opens.

In open weather all ruts in roads should be filled up, then run a heavy roller over the whole; while gutters and drains ought to be cleaned of sand, leaves and other obstructions, so that all water may pass off freely, while neatness and good order may prevail wherever one may turn himself.

Give air during the day to cold frames and pits whenever the weather is moderate, and see to it that house or ground mice have not found a lodgment inside, and if so, in order to rid yourself of them, soak a few peas in water strongly impregnated with arsenic, then cover them lightly in a pot of light earth or sand and place the whole where the mice can readily reach them—to their detriment.

Very little watering is required to keep plants in cold frames in good condition during the winter or dormant season.

We continue our remarks on a few more of our native trees, which ought from the beauty of their form and unique foliage find a place in our parks and lawns, and the first one we notice is the Willow Oak (*Quercus Phellos*), a tree ranging from fifty to seventy feet in height, of good form, having long narrow willow formed leaves, and bearing small acorns, which do not come to maturity until the second year. It is not what we would call a social tree, but found scattered thinly through low woods of other oaks, and contrasts well with the lobed leaved kinds.

The next is the Swamp or Pin Oak (*Quercus palustris*), the form or outline of this tree is what we term handsome; medium in size, throwing out numerous branches almost down to the ground, which bear beautiful sinuated leaves and small acorns; these like the last take two years to come to perfection.

The Chestnut Oak (*Quercus Castanea*) is another well marked and attractive kind, having a broad branching head, which bears leaves which very much resemble the common Sweet Chestnut. In many parts of Maryland it is found assembled in large groups.

#### GREENHOUSE.

A careful cultivator will not neglect to keep up as much heat as will prevent all frosts from penetrating; but be it remembered that an excessive high temperature is as detrimental to plants as an unduly low one. Sixty-five degrees is high enough for a mixed collection of so called greenhouse plants, and not permitting the thermometer to fall much below forty degrees. Farther, the watering of plants in an indiscriminate manner during the dead of winter is fertile in producing sick subjects, particularly such as are in a semi-dormant state; these should get no more than would keep them alive and plump, while those in a growing state require much more, observing in fine weather to syringe overhead with soft tepid water; but in doing this avoid throwing it on such things as the expanded flowers of Camellias and Azaleas.

Put in cuttings of Geraniums, Coleus, Achyranthes, Alternantheras, with such other soft wooded plants suitable for bedding out purposes; these when well rooted should be potted into thumb pots, and by pinching back when they get a few inches high will be nice stocky specimens by planting out time.

Seed should now be sown of Centaureas, Mignonette, Sweet Alyssum, Petunias, and such other things as may be wanted. Seeds germinate better now than they will do farther on in the season. Heat, moisture and shade are the three elements necessary to secure success in raising plants in this way.

Cinerarias and Calceolarias will require several shifts into larger pots as they progress in growth; they will bloom well when moved into seven or eight inch pots; both are subject to the attacks of green fly and red spider, therefore should be kept in a cool part of the house near to the glass. Water will destroy the red spider, and tobacco smoke will kill the green fly.

We write for the benefit of those having private greenhouses, and would suggest to such as have charge of the same that they rearrange the plants on the stages at least once every two weeks; this prevents the plants from becoming lopsided, and the change assists in giving a greater interest to the collection.

#### Kitchen Garden—February.

The Editor notices a slight misapprehension on the part of "R. S. C." in his article on the cabbage worm, and kindly gives me an opportunity to rectify it. In doing so I should like to make several other corrections. First, I have not called in question the hot water remedy. It is an old and well-known remedy for the worm on small patches of cabbage, and it must be equally effective on a large scale if properly applied. How to do it in a satisfactory manner will require some thought and experience. Then, again, it was a neighbor and not I who recommended hand-picking. Still, I know of a man in St. Mary's county, Md., who saved his cabbages last fall by this means. The children did the work before and after school hours. Of course, it is vain to attempt it after the worms have got well ahead. In this connection the arithmetical question proposed looks to me like this: If it takes one man more than he can do to bail the water from a running stream, how many will it take to bail the water from an indefinite number of such streams.

The "large grower," so far as we can judge, in picking from one plant was in reality picking from the field at large, although the worms were kind enough to save him some steps. Thirdly, in mentioning air-slaked lime, I expressly said that it don't hurt the worms, but that they show a great dislike to it. For instance, if lime is sprinkled so as to make a ring of some size and a worm placed therein, it will crawl around

very many times before it will venture to cross it. Further, I repeat that the worms here left a frame of cauliflower immediately after an application of lime; but I drew no conclusion, as it may have been caused by some other reason. I am no authority on worms or anything else and am heartily glad to hear of suggestions for the check of this pest. The enfeebling effect of the drouth on the plants doubtless gave the enemy an advantage that he may not soon enjoy again. Still it behooves us to be wide awake and, if possible, better prepared for his attack.

During the month little can be done in the garden, but much may be done in the way of planning and preparation. Some think they forward the work by drawing out manure, but I have always preferred to draw when actually wanted. The best place for manure just now is in the heap. Bean poles should be prepared, and pruning of grapevines, currants, etc. finished up, if not already done. Seeds should be got early and those who have a greenhouse would do well to test some of the leading kinds. If only fifty per cent. grow, then, of course, we must sow twice as thickly and buy twice as much seed as we otherwise would. Hot-bed making will be in order from the middle of the month onward. Those not skilled in the business had better wait a few weeks longer. A hot-bed requires more attention as to airing than a greenhouse, and mistakes are thus often made by beginners. But mistakes are necessary to success, and a little experience is worth a page of printed directions. A thorough shaking up of the stable litter, at least twice, a moderate treading down of the same in the bed, and six or eight inches of light earth after the violent heat has passed away are some of the essentials. And when one bed has been formed it will be time to gather material for another, and some will require a third bed or series of beds, for we never seem to have room enough in which to stow away our spring treasures.

JOHN WATSON.

#### The Cabbage Worm Again.

Messrs. Editors American Farmer:

No doubt we may expect a visit from this pest again next season, but this is not exactly the meaning of my title. A remedy given by our Alabama correspondent has been called into question by the gentleman who writes up the Vegetable Garden in THE FARMER, on account of the difficulty of applying scalding water to the plants to destroy the striped cabbage worm. We have our correspondent's word for it, that by means of scalding water applied from a watering pot once a week, directly upon his cabbage, he succeeded in saving two acres which netted him four cents per pound, while not one hundred heads were saved, to his knowledge, in his neighborhood. Our great need in this matter is actual experience. We may have to abandon the culture of cabbage for a few years to come, which means the absence from the tables of rich and poor alike of this popular vegetable. It then follows that whatever of practical experience we may obtain from others should be gratefully accepted, especially when no better remedies are suggested. Mr. Watson recommends hand-picking, but had he come in this section last September he would never have made the suggestion.

Now for experience in this matter, nearly every grower of cabbage in Anne Arundel county attempted this until forced to give it up in despair. One large grower told me of his attempt to keep one plant clear of worms by daily hand-picking. This was kept up until the plant disappeared from view. Now for a little figuring in menial arithmetic. If it takes one hand more than he can do to keep one plant clear, how many will it take to hand-pick a field of fifty thousand or more?

Mr. Watson also suggests air-slaked lime.



This may do for the common green worm, the larva of the white and yellow butterfly, but had no effect under my observation with the latest enemy. They bore into the centre of the heads and are quite out of its reach, even if they cared for the application. Besides, the lime heading up with the cabbage imparts an unpleasant look and flavor when cooked. It may not be out of place to state here that several growers near Baltimore, in desperation, at last applied Paris green, with little or no effect. Thus it will appear that all remedies were exhausted in the attempt to save the crop. We are convinced that the best plan is to cease growing them for several years, when having nothing to feed upon, the worms will naturally disappear. In regard to the difficulty in applying scalding water to a large patch, we think it can be done quickly and conveniently, by having near the patch one or several large swinging iron kettles holding a barrel or more each of water, under which a brisk fire may be kept up. Nothing short of an application which will be instant death to the worms will be of any avail. The scalding water will kill them instantly without injuring the cabbages. Probably the best remedy is the destruction of the brown miller which deposits the eggs. A friend of mine who noticed their habits closely, informed me that he had observed them more active at night-fall than at any other time; and suggests that large fires be kept burning around the fields for a few nights, which would attract and destroy large numbers. A half barrel, smeared well inside with tar and containing a lighted candle, would no doubt be of good service, besides being less expensive. There is no doubt but the eggs are deposited mostly at night, as I have never observed the miller at work during the daytime.

It is said by those that profess to know that the worm so troublesome the past season is the same that has destroyed the cabbage crops of the south during the past few years, and that its extension as far north was owing to the unprecedented long spell of hot, dry weather last summer. Perhaps some of your southern readers could give us some information on this point through the columns of THE FARMER. The worm in question is about one inch in length, of a green color, striped along the back with bars of black and white. In crawling, it has the doubling-up motion of the common measuring worm.

R. S. C.

Anne Arundel County, Md., Jan. 19.

#### Minerals, Etc., Received.

Of two specimens from "Subscriber," in Howard county, received January 7th.—One specimen is pure white quartz crystallized. If in large quantities, it may be of use to the queensware manufacturers or glasshouses.

The other specimen is yellow quartz, (amorphous), and has a streak of yellow sulphuret of copper through it, sufficient to make it quite an object to investigate the matter thoroughly, as there ought to be more copper where the specimen comes from. This specimen has also a good showing for carrying gold, but only an assay can decide this.

The sample of supposed "marl" from a subscriber in Queen Ann's County, Maryland, sent us, is *not* marl, and does *not* contain a trace of lime. Its composition is purely alumina and sand of no special value.

LEHMANN &amp; MAGER.

MESSRS. R. G. CHASE & Co., who advertise for agents in this issue, offer as specialties a number of new fruits which promise to find a place in popular estimation as profitable market sorts. Amongst these are Kieffer's Hybrid pear, the Langford Seedling and Yellow Transparent apples, the Champion quince, Queen currant, etc. Men with the qualifications they demand, seeking occupation, are recommended to address them on the subject.

## The American Farmer

"O FORTUNATOS NIMIUM SUA SI BONA NOBIS  
"AGRICOLAS." Virg.

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\*. Subscribers who have minerals, ores, marls, fertilizing materials, or other substances, will be advised through our pages, by competent chemists, as to their composition, uses and value, by forwarding specimens to this office, *expressage or postage prepaid*. Questions as to application of chemical science to the practical arts will also be answered.

\*. Persons desiring information or advice on diseases or injuries of domestic animals, will receive replies from a competent veterinary surgeon, by giving a plain statement of the symptoms, etc.

\*. Microscopical examinations will be made by an expert of fungus growths and other objects sent.

At the office of THE AMERICAN FARMER are located the offices of the following organizations, of each of which its proprietor, Wm. B. Sands, is secretary:

Maryland Horticultural Society.

Maryland Dairymen's Association.

Maryland State Grange, P. of H.

Agricultural Society of Baltimore Co.

Also, of the Maryland Poultry Club, Geo. O. Brown, Secretary.

BALTIMORE, FEBRUARY 1, 1882.

#### Our Subscription List.

In our last we noticed the fact that our receipt for the present volume had increased fifty per cent. over those of last year up to the same date, and the same ratio has been maintained up to the end of January, which, considering the unpropitious weather, may be considered as a very favorable showing. But with the greater inducements presented, we ought this year to double our subscription list. We thank our numerous friends for their aid, and hope they will continue their efforts in behalf of the old FARMER.

Our offer of premiums does not expire for several months, and we hope many more than have yet done so will avail themselves of them. We have already sent out a considerable number, all so far as heard from giving satisfaction, and a number of friends of THE AMERICAN FARMER have forwarded partial lists to which they expect to make liberal additions. It should be borne in mind that the names can be sent on as secured with the money, and when they obtain the number aimed at, they can demand the premium, which we will forward promptly.

#### The Poultry and Pigeon Show.

As we go to press, the exhibition of the Maryland Poultry and Pigeon Club is in progress at Raine's Hall, in this city, and the display is a handsome and interesting one and creditable to the new association. There are some five hundred coops, comprising almost every established variety. We advise all our readers who are so situated that they can do so, to visit this gathering of the feathered tribes.

#### Announcement.

It gives us great pleasure to announce that Dr. Thomas Pollard, of Virginia, late Commissioner of Agriculture of that State, has become associated in the editorial control of THE AMERICAN FARMER, and will have immediate charge and supervision of those subjects especially concerning the agriculture of his State.

Dr. Pollard is so well known to the farmers and planters of Virginia that he will need no introduction from us, his work in the organization and management of the Department of Agriculture, from which he has just retired, having demonstrated at once his practical ability and his progressive views. We congratulate our readers on the fact that his connection with our journal makes available a rich experience and a large acquaintance with the problems now demanding attention from the agriculturists of Virginia as well as coterminous States; and we believe, with the already liberal patronage we receive from Virginia, that—as in the times when those eminent Virginia agriculturists and writers, Edmund Ruffin and Willoughby Newton were regular contributors to its pages—so, now, the association of Dr. Pollard with its direction will add largely to the circulation and influence of the Old Pioneer, which was so early and has been so long favored and honored by the support of the best men among the agriculturists of the Old Dominion.

#### Sale of Percheron Horses.

As will be seen by the notice on our advertising pages, the entire lot of Percherons imported by Wm. T. Walters will be sold in this city at public auction on the 22d of March. These horses have heretofore been described in our columns, and are the best representatives of this celebrated race ever brought into this country. Chosen under peculiarly favorable circumstances in their home, they have now become thoroughly acclimated, and will be as their predecessors have been, efficient agents in the improvement of the heavy draft horses of this country. The value of the Percheron and his crosses as the farmers' horse is becoming every day more firmly established, and the specimens now to be offered may be said with confidence to embody the essential good points of the breed in their highest development. The attention of farmers' clubs and other organizations is directed to the opportunity this sale affords of securing a stallion whose influence in the improvement of the horses in their respective neighborhoods will be worth many times the cost.

#### Insurance of Farm Stock.

The announcement elsewhere in this issue of the People's Live Stock Insurance Company, organized for protection against loss by death from disease or accident of farm and other live stock cannot fail to attract attention. The management of this new corporation is in capable and energetic hands, and especial care has been taken to free its operations from all the objectionable features which have often made the insurance of live stock a business full of risk and uncertainty. Special provisions have been made adapting the security provided to the requirements of farmers, and with the exemptions from loss which its operations now offer there is no reason why our farmers should not protect themselves against loss by the death of their horses and cattle as they do their houses and barns against damage by fire. We commend this company to the favor of our readers.

THE FARMER'S ANNUAL HAND-BOOK for 1882, by Drs. Armsby and Jenkins. Price 50 cents. From Messrs. D. Appleton & Co., New York, we have a copy of a very useful little volume of this title, containing a blank space for memoranda for every day in the year and a great deal of valuable information for the farmer, in a compact form and easy of access, for which he would otherwise have to search through many volumes. It is a publication which deserves to be well supported.

#### Prize Essays.

It will be borne in mind that February 10th is the date by which these are to be delivered to the publishers of THE AMERICAN FARMER. There is still time remaining for any persons who have delayed entering the contest to prepare their manuscripts. We hope to have some very valuable papers to present to our readers.

#### The Maryland Breeders' Association.

In our notice of this new organization, the types should have made it read that it is *not* its purpose to hold exhibitions. A committee appointed to consult with the various associations of merchants and others with reference to a large exhibition here next fall is making, as we understand, satisfactory progress, and has received assurances of substantial aid, and at the last meeting of the directors an invitation was received from the Maryland State Agricultural Society asking the co-operation with it of the Breeders' Association, in the event of the National Association deciding not to hold its first fair here.

#### The Gunpowder Farmers' Club

Met January 28th at Col. W. S. Franklin's, at Ashland. The late date prevents our giving a full report of the discussions. The club resolved to press the Legislature to abolish the compulsory inspection and weighing by State officials of hay and other farm products sold in Baltimore, and determined to visit Annapolis in a body to impress their views on the members.

#### Personal.

Mr. Orestes Pierce, of East Baldwin, Maine, an extensive breeder of Jerseys and the owner of most, if not all of the males of the celebrated Scituate family, paid us a hurried visit a few days ago, on his return from the south. He made the acquaintance of several of our Maryland breeders, and, we believe, visited some of the Baltimore county herds. We hope to hear from him his opinion of southern Jerseys in general, and particularly of those of this vicinity.

#### Encouraging Words.

In our correspondence at this season, we receive many tokens of the good will and kind feelings of our subscribers; and we choose a few as showing the general opinion as to the change in THE FARMER.

"I think your semi-monthly a glorious one indeed. It is good all through. How I should like to shake the hands of the patriarch A. B. Davis for his clear and honest views." R. E. DUYALL.

Harford County, Md.

"I think the change you have made is a step forward. You have my best wishes for its success." W. F. BAILEY.

Queen Anne's County, Md.

"I am glad to know you have made the change in THE AMERICAN FARMER. I wish I could receive it once a week."

Monroe County, W. Va. R. A. DUNLOP.

"Though a lawyer, yet I am still a farmer who has for that profession (for such farming really is) the most enthusiastic fondness; and of the farm papers which I take, none are more appreciated than the veteran AMERICAN FARMER." J. C. WEEMS.

Prince William County, Va.

"That your new departure may be so successful and remunerative as to give us a weekly peep at you, is the sincere wish of" F. B. STEINER.

Anne Arundel County, Md.

"I consider it one of the most valuable agricultural journals within my knowledge, and I subscribe to half a dozen. Each number is worth the subscription price."

"I am greatly pleased with the change to twice a month, and would not object to it weekly." C. J. KINOLVING.

Prince George's County, Md.

"I congratulate you on the improved appearance of THE FARMER."

R. S. SAUNDERS.  
Editor Southern Planter.



### The Grange.

#### Subjects for Subordinate Granges for February—National Lecturers' Communication.

**Question**—How to co-operate successfully?

**Suggestion**—Unite in every effort in advancing the principles of our order and the interest of our class. Work together in the missionary field for recruits. Think, read and talk about the Grange, its principles and objects, with your families and neighbors. Let each member go to the Grange meetings, fully determined to learn and to teach; participate in the educational exercises and discussions of Grange questions. In this way you co-operate to educate and educate to co-operate. This method of co-operation will assure the success of the social and educational features, and then the financial benefits are only a question of time. By these co-operative efforts you build up the prosperity of your Grange and fully establish its permanency; and when it is so established and co-operation continued, it will prove of tenfold more value to the members and their families than a like amount of time, effort and money invested in any other enterprise.

**Quea**—How can we make farm operations most successful?

**Sug.**—Systematize all farm work; then have family and all help co-operate in carrying the system into execution. Consider the kind of crops best adapted to your soil and climate, and the most salable in your markets. Consider at home and discuss in the Grange meetings how to accomplish most and to the best advantage with the least expense and labor; how much hard work and muscle force can be saved by the proper exercise of brain power in arranging farm, fence and fields, and in cultivation and harvesting; how to care for stock and crops while growing, to obtain the best results; and when, where and in what condition to market your product. This subject well considered, so as to be properly understood, would save much hard labor, produce better crops, return larger profits, and leave results much more satisfactory.

#### Maryland Granges.

**QUEEN ANNE'S COUNTY GRANGE.**—Master, Wm. F. Bailey; Overseer, C. H. R. Merrick; Lecturer, John Dodd; Steward, James Tilghman; Assistant Steward, Joshua E. Cooper; Chaplain, Nathan Green; Treasurer, Ephraim Vandyke; Secretary, John B. Thomas; Gate Keeper, Wm. T. Higgins; Pomona, Miss Adie Morgan; Flora, Mrs. E. B. Vandyke; Ceres, Mrs. John Dodd; Lady Assistant Steward, Miss Nannie Tilghman.

**WEST RIVER, No. 15, ANNE ARUNDEL COUNTY.**—M., H. M. Murray; O., Samuel Brooke; Lec., Jos. R. Owens; St., J. Rogers Woolen; As. St., Wm. H. Hall; Ch., Samuel F. Waters; Tr., A. M. Thomas; Sec., Wm. Shepherd; G. K., Addison Owens; C., Mrs. Edwin E. Gott; P., Mrs. Lucy P. Welch; Fl., Mrs. Addison Owens; L. A. S., Mrs. Samuel Brooke.

**MANTUA, No. 163, BALTIMORE COUNTY.**—M., Chas. W. Semmes; O., Geo. Chilcoat; Lec., Jas. J. Given; St., Edw. Chilcoat; As. St., J. G. Gent; Ch., T. C. Childs; Tr., Aquila Chilcoat; Sec., O. W. Gent; G. K., Wm. D. Griffith; C., Mrs. Chas. Semmes; P., Mrs. E. P. Philpott; Fl., Miss Mary Chilcoat; L. A. S., Miss Amanda Chilcoat.

**JEFFERSON, No. 167, FREDERICK COUNTY.**—M., Geo. L. Whips; O., Jno. H. Culler; Lec., Wm. H. Lakin; St., Thos. Thrasher; As. St., Carlton Horine; L. A. S., Mrs. D. M. Culler; Ch., Milton R. Rice; Tr., John W. Long; Sec., Jno. S. Lakin; C., Mrs. Mary Slagle; P., Mrs. John H. Culler; F., Mrs. Carlton Horine.

**GUNPOWDER, No. 127, BALTIMORE COUNTY.**—M., Ben. F. Taylor; O., Dr. Edw. Albrater; Lec., Dr. W. T. Allender; St., Alfred Crossmore; As. St., D. S. Gittings, Jr.; Ch., Edw. Reynolds; Tr., Garrett Brown; Sec., W. T. Blair; G. K., Geo. Roeder; C., Mrs. B. F. Taylor; P., Miss Mamie Bell; F., Miss Lottie Chatterton.

**PRESTON, No. 119, CAROLINE COUNTY.**—M., Hy. P. Willis; O., Joseph Harrison; Lec., S. H. C. Davis; St., Willis Wright; As. St.,

Nathaniel Modford; Ch., William Fisk; Tr., Jesse Wright; Sec., Jabez Wright; G. K., John Wright; C., Mary A. Davis; P., Lucio Noble; F., Caroline S. Merrick; L. A. S., Ann E. Trice.

**ROCKVILLE, No. 12, MONTGOMERY COUNTY.**—M., E. O. Edmonston; O., George Shaw; St., Sandy Garrett; As. St., D. H. Horner; Lec., J. W. Horner; Ch., C. G. Wilson; Tr., J. E. Wilson; Sy., E. W. Horner; G. K., James Benson; C., Mrs. E. O. Edmondson; P., Mrs. Joe Keys; F., Mary Horner; L. A. S., Mary Higgins.

**WICOMICO, No. 69, WICOMICO COUNTY.**—M., Samuel H. Fooks; O., Wm. P. Pryor; Lec., John L. Morris; St., A. P. Malon; As. St., Purnel Fooke; Ch., John Reddish; Sec., T. Irving Kent; Tr., Hezekiah Hasting; G. K., Winder H. Hasting; C., Mrs. W. W. Hayman; P., Mrs. Mary Hasting; Fl., Mrs. James Dykes; L. A. S., Mrs. Eliz. Livingston.

#### Cecil County (Md.) Agricultural Society.

The following directors have been elected for the ensuing year: A. R. Magraw, William J. Jones, Hon. Frederick Stump, Wm. M. Knight, Dr. Jas. A. Mearns, John W. McCullough, A. W. Mitchell, Thos. Drennen, George Ricketts, Wm. Armstrong, G. W. Cruikshank, and Col. I. D. Davis; and they have chosen the following officers: A. R. Magraw, President; Geo. Ricketts, Vice-President; John Partridge, Secretary, and Wm. T. Warburton, Treasurer. The date of the fair for 1882 has been fixed for October 3d to 6th.

### Home Department.

#### The Knitting Stocking Among the Fine Arts.

While aesthetic signifies old-fashioned (and that is the most common conception of the term) it is rather a beneficent craze. Not only does it relieve garret and store room of much that has for ages lumbered them to the annoyance of vigilant housekeepers and furnish the living portion of the house with the most approved bric-a-brac, but in the restoration of open fire-places and andirons, gives us the healthful and cheery glow that inspires to old-fashioned occupations. It is true the constitutionally idle may expend their newly awakened impulses in twirling a fire screen or fan, but if there is a spark of ambition to accomplish something, this open fire is sure to call forth some handiwork. Some one who is pre-eminent in aesthetics has brought forth grandmother's knitting needles and introduced the long neglected knitting stocking to meet this new demand. So much for the eternal fitness of things. Just as our young women were reduced to the utmost extreme of idleness in affluence, providence steps in and reforms fashion to save them. Behold, therefore, the emancipated school girl, who soon becomes surfeited with the rush of out-door dissipation, and the sewing machine's ready made garment system having rendered plain sewing a waste of time; while the ordinary run of novels are so much of a dullness that she knows the end of each by reading the first chapter—when lo! she finds just the coveted variety in the aesthetic knitting stocking. Never before have the manufactories of the different parts of the world provided coverings for our feet in such perfection and variety, yet their choicest productions are as nothing in value compared with the work of dainty fingers. We are, therefore in no present danger of having the knitting needles superseded by the knitting machine. Silk, wool and cotton are each formed into every degree of quality, to suit this new demand, and no doubt we shall ere long have a perversion of the beautiful simplicity of taste that has made the straight-forward knitting needles of olden times so much sought for, by their manufacture from some valuable metal, perhaps, with their points jewel tipped. Yet, if out of it comes a real awakening of the

latent powers of hitherto idle fingers that were threatened with physical incapacity through disuse, we may live to bless the aesthetic craze.

CERES.

#### DIRECTIONS FOR KNITTING STOCKINGS.

Take for your pattern a stocking or sock the size you wish, smoothly pressed—one just from the store is best. In order to ascertain how many stitches are required, set up and knit first a few times back and forth on a small piece, say twenty stitches, until you can measure how many stitches are required to the inch, then find out the number of inches in your pattern stocking. Having set up the stocking with the stitches divided evenly upon three needles, if you wish to rib the top, knit two plain, then purl two; repeating this until you have ribbed as far as you wish, always taking pains in the different rounds that the same kind of stitches shall follow each other. When you reach the point where narrowing should begin, which is best ascertained by comparison with the pattern stocking, narrow within one stitch on each side of the seam stitch, by taking two stitches together before you come to the seam and slipping and binding after it is passed. Do this at every three-quarters of an inch that is added to the length of your stocking until the proper size for the ankle is reached, then knit straight, keeping the seam stitch until the stocking leg is as long as you wish it. Begin the heel by taking half the stitches on two needles, keeping the other half with the seam stitch in the middle on another needle for the heel. On the half set apart for the heel, knit back and forth, one way the same stitch you use for seaming, the other straight until you have three-fourths the length of your middle finger, when you begin closing the heel by narrowing each time you are knitting the straight way, the tenth stitch from each end of the needle and the second one each side of the seam until the narrowings meet. Then fold the heel together on the wrong side and close by taking one stitch from each needle. Knit them together and bind with the seam stitch. Do the same with each of the next stitches until you have only the seam stitch left. Turn the heel again to the right side, keep the last stitch on the needle and begin taking up stitches on the side toward the left as you hold the open part from you. Widen every fourth stitch by throwing the thread around the needle without knitting, which is knitted the next round, thus making a stitch. When you reach the instep needle knit across until you reach the other side of the heel, where the stitches are taken up in the same manner as the first. When you again reach the end of the needle on which the heel stitches were taken, narrow the two stitches next to the end one, and on the opposite side of the ankle slip and bind the two corresponding stitches. Continue narrowing in the same way until by comparing with your pattern you find it sufficiently narrow. Knit the foot the length you wish. To narrow off the toe, narrow every seventh stitch, knit seven times around, narrow every sixth stitch, knit six times around, then every fifth, fourth, third, and at last every stitch. Fasten with a darning needle and your stocking is complete.

#### A Chapter for Lady Readers.

I sometimes get letters from ladies, who, having seen their children grown up around them, find themselves for the first time in many years with a little leisure which they wish to improve in general reading. Knowing that I have spent my life among books, reviewing and examining successive volumes at different times for more than twenty years, these correspondents naturally conclude I must have some information on the subject which may be of value to them, just as in their busy, useful lives much has occurred that would be of use to me. What books shall we read that will be the most improv-

ing to the mind and at the same time make us generally well acquainted with literature? is the question asked. And afterwards I hear of the pleasure derived from the books recommended, and the new world of thought and experience unfolded. It is far more important that the mother should be educated, well informed and intelligent than the father. The latter uses his information in the more sordid channels of business, but the mother in the cultivation and expansion of immortal souls. To be agreeable and companionable to sons and daughters, the mother should constantly improve. Perhaps some of the lady readers of THE FARMER may be interested by just such items. First in explaining the Scriptures and giving knowledge of eastern life and customs, such as throw light on the Bible, Kitto's Daily Bible Illustrations, (R. Carter, New York) are invaluable. Whilst suited to all Protestant readers, they are admitted by all evangelical denominations and stand at the head of all such works. Kitto's life is also intensely interesting. He was a poor English boy in a work house, entirely deaf from a terrible fall from a ladder. He lived long in the Holy Land, and his Biblical knowledge made him eminent among students and oriental scholars. The readings are for every day in the year.

Of all wonderful books of eastern travel, Dr. Porter's Giant Cities of Bashan and Syria's Holy Places, (Nelson, New York), is the most astonishing. These cities of giants, captured by the Israelites, still stand, with their stone doors, one of which I saw in the British Museum, and which only giants could use. The author risked his life to visit places seen by no other traveler. A very small book, *Ecce COLUM*, by Rev. Mr. Burr, magnificently written (indeed the first chapter is really worth committing to memory for its style) gives a most animated history of the heavens and the wonders known of the starry worlds. It is the clearest and best book of the kind I ever saw for the general reader. Most written sermons are exceedingly dull, but those of F. W. Robertson, (Harper's) in English circulating libraries, have been more widely read than popular novels. They are full of practical common sense and of rich life experience, as well as deeply spiritual. Continually as you read them you say to yourself, "There is my own personal experience crystallized in a single sentence. I did not suppose another had felt just the same." Our own copy has for years been so pencil-marked that it is really defaced.

MRS. JANE BOSWELL MOORE BRISTOL.

#### The Brents' Experiment.

(Concluded.)

Mr. Brent had little comfort to carry to poor Leasha in regard to home matters, and advised her strongly to go over on the following Saturday, feeling that at least the hunger of their hearts might be fed by the sight of her, and at the same time hinting to Mrs. Brent that a basket with such things as old people craved might very appropriately be sent by Elizabeth. Before Saturday came, however, a new plan for their relief was started and rapidly assuming a plausible shape. There was a building only a short distance from the house, which was probably older than it, and had some time been built for a carpenter's or cooper's shop. It was too near to be turned into a laborer's house, too good to tear down, and the shed attached, which was really about half of the building, was so useful as a wood-shed that it had been allowed to remain, notwithstanding its rather objectionable location, and Mr. Brent also found it useful in bad or cold weather as a place to mend his tools, or do little jobs of amateur carpentering. The large open fireplace and two windows at each end were both useful at such times, giving abundance of light and the means of warming themselves even in the most severe weather. It was therefore at some self-sacrifice that Mr. Brent was willing to give up this convenience, if other things favoring, it should be thought wise or well to put it in habitable condition and bring the old people there, where their youthful guardian (for Elizabeth was only



nineteen) might have a constant care over them.

The question was well digested, and the young people's ardor wrought to its highest pitch before it was broached to Elizabeth, in order that false expectations might not be raised. And when it at last was thought to be entirely practical, and the possible comforts the place held for those poor old people clearly pictured in each of their minds, it was rather dampening to see Elizabeth's cool and questioning manner of receiving the proposition. She was a girl of few words, and decidedly non-committal by nature. Having so long been battling for her own and her grand-parents' rights at home, the thought of abandoning them all to the enemy doubtless jarred on all her fixed notions. Nor could she comprehend the disinterestedness of such large-hearted people, although herself so free from selfishness; there was a doubt in her mind as to their motives. At the same time the shop in its present condition was not an inviting place—she had not, like the young Brents, turned it into an "airy castle." She assured Mrs. Brent repeatedly that the old folks would be no use to anybody. The subject was thus "tabled" for the present, and Leesha went, by Mr. Brent's advice, to spend Saturday night and Sunday at her old home. Returning early Monday morning, she went about her duties as usual, without a word in reference to the subject. The day being stormy, Mr. Brent and Samuel were at work in the shop, with a good fire to cheer and keep them warm. Several times when Leesha went to the shed for an armful of wood they noticed she quietly opened the door, looked in and all around, when she would withdraw again and go about her business without a word to any one. Just at twilight, however, Samuel came in and said poor Leesha was "going on" again out in the shop, whereupon Jennie threw something over her head and went out through the storm to see what was the matter. There sat the poor girl crouched over the remains of the fire, sobbing in a most agonizing way. Jennie tried hard to soothe her, but she seemed utterly given up to her grief. "Oh! if they were only here to-night!" she repeated over and over, as if the thought of their condition was more than she could possibly bear. Before Jennie succeeded in coaxing her back into her clean and comfortable kitchen, she had explained all their plans for improving this place, and the girl was awakened to her own blindness in not seeing how good it might be for the old people as well as herself to have them there, and she begged Jennie to tell her father and mother, fearing she might have offended them by her indifference.

Mr. Brent had anticipated this reaction from her visit home, and therefore held himself ready to take the matter promptly in hand. He first inquired as to where "that man" could be found, and then went to the mill where he was at work and sought an interview in the presence of his employer. Then stating the case as fairly as he could, and getting an admission from the man as to the value of the place, he told him he must choose between giving Elizabeth two-thirds of what the rent of it would be yearly, to enable her to maintain her grand-parents, or else the property would be disposed of, and they would have what the law gave them; telling him also that if this were done promptly and regularly, the old people would leave him and his family in peaceable possession, and he would be relieved of what was evidently a great burden.

The overbearing nature is always cowardly, and this man was no exception. He saw that Mr. Brent meant to see justice done to those he had thought in his own power, and not wishing to leave a home it was his interest to hold, he sullenly yielded and signed such writings as Mr. Brent had already prepared, with his employer for a witness. This was another and grateful surprise to poor Leesha, giving her sufficient, with what she could earn to keep the old people comfortably.

No time was lost in preparing the house; a carpenter put in the partitions that made two nice bed rooms at one end with a window in each, and then Leesha and Samuel took the rest in hand—she to whitewash and he to paint the wood-work and floor. He insisted upon selecting the colors himself, and although they ridiculed his passion for red, could not but admire the effect when his work was finished. The mantel and door and window frames were what Samuel called a lively red; the rest, a medium shade of brown; and the floor a compromise between yellow and brown, the hearth, however, receiving the last remains of the red paint, and the jambs of the fire-place a shining coat of lamp-black.

The contrast was pretty strong with the white walls, but here Miss Lane and Jennie saw their opportunity for toning down with pictures and window curtains. It was not

till the day before Christmas that everything was in readiness, and Leesha was dispatched, with the willing aid of Mr. Brent's man and a large sleigh well provided with a bed of straw in the bottom, plenty of buffalo robes and an old-fashioned wagon chair, resurrected from some out-of-the-way place, to make the long ride comfortable to the old people.

It was nearly dark when they returned, Leesha sitting up in front beside the driver in all the pride of possession; the old people lower down in their seats peering out like two sparrows, and their goods and chattels piled in the back part of the sleigh towering above everything else. Leesha was directing the man to drive up to the kitchen door, where she proposed leaving them while she made the home comfortable, doubtless looking forward to half a night's work at it, but seeing her intention, Sam, Jennie and all the little ones came rushing out of the prospective home and called them to come on over there. Leesha, in haste to see what was the matter, jumped out, and in her eagerness tumbled all the way over, when the children pulled her in to see—what? Why, there was the room looking, as she afterwards expressed it, "for all the world as if some one had always lived in it." There were bright chintz curtains at the windows, pictures on the walls, a cupboard in the corner which Samuel had manufactured from a couple of dry goods boxes and decorated with his favorite colors, and the females had finished with a curtain to draw aside or not as you pleased, corresponding with those at the windows. An extra kitchen table had been purloined, just because it would turn up and could be set aside when not used; this, too, had the ubiquitous coat of red, except the surface, which Leesha never would have suffered to be any other than the white which only elbow-grease could give. This stood in the floor all ready spread for the travelers' supper. A few chairs had been borrowed, with the privilege of keeping or returning as might be needful. On the hearth was the good hot supper prepared by Jennie's own hands, and the tea-pot, the odor of which, together with the glow of the generous fire dancing over everything in the room, imparted a sense of comfort to the weary travelers beyond anything else.

But we are not to suppose Leesha left the old people waiting while she took all this in. She gave one comprehensive glance, and true to her nature rushed back without a word to the children so eagerly watching the effect of their labor of love. She ran back to the sleigh, half laughing and half crying, "Oh! come! do come and see!" and, but for the decision of the driver, she would have dragged them from the sleigh to go through the same process of tumbling through which she had gone. Even when he had driven them over as near their own door as possible, which stood wide open revealing all the glory within, these old people had no thought but for their traps, to get them safely unloaded, while Leesha continued her "Come! do just come and see!" At last they stood upon the threshold, and, like Leesha, took a long, steady look, when the old man reverently raised his hat, while the old woman as reverently folded her hands and bowed her head in silent acknowledgment of thanks to the Giver of all Good for these His mercies.

No doubt we should all enjoy stopping with this happy party to witness their delight in every provision those cheerful workers had made for their comfort, and how nicely their own carefully treasured belongings fitted in and gave it a home look; but they are entitled to their privacy in this, to them, solemn season, and we will leave them with the full assurance that theirs will be a happy Christmas, perhaps to look in upon them when another Christmas shall have tested the wisdom of this effort of the Brents to "do diligently what their hands found to do" to gladden the hearts of His people, who came to bring glad tidings on that first great Christmas long ago.

#### Excitement in Rochester.

#### THE COMMOTION CAUSED BY THE STATEMENT OF A PHYSICIAN.

An unusual article from the Rochester N. Y., *Democrat and Chronicle*, was republished in this paper two weeks ago, and was a subject of much conversation in this city, both in professional circles and on the streets. Apparently it caused even more commotion in Rochester, as the following from the same paper shows:

Dr. J. B. Henion, who is well-known not only in Rochester, but in nearly every part of America, sent an extended article to this paper a few days since, which was duly published, detailing his remarkable experience and rescue from what seemed to be certain

death. It would be impossible to enumerate the personal enquiries which have been made at our office as to the validity of the article, but they have been so numerous that further investigation of the subject was deemed an editorial necessity.

With this end in view a representative of this paper called on Dr. Henion, at his residence on St. Paul street, when the following interview occurred:

"That article of yours, Doctor, has created quite a whirlwind. Are the statements about the terrible condition you were in, and the way you were rescued such as you can sustain?"

"Every one of them and many additional ones. Few people ever got so near the grave as I did and then return, and I am not surprised that the public think it marvelous. It was marvelous."

"How in the world did you, a physician, come to be brought so low?"

"By neglecting the first and most simple symptoms. I did not think I was sick. It is true I had frequent headaches; felt tired most of the time; could eat nothing one day and was ravenous the next; felt dull, indefinite pains, and my stomach was out of order, but I did not think it meant anything serious."

"But have these common ailments anything to do with the fearful Bright's disease which took so firm a hold on you?"

"Anything? Why, they are the sure indications of the first stages of that dreadful malady. The fact is, few people know or realize what ails them, and I am sorry to say that too few physicians do either."

"That is a strange statement, Doctor."

"But it is a true one. The medical profession have been treating symptoms instead of diseases for years, and it is high time it ceased. We doctors have been clipping off the twigs when we should strike at the root. The symptoms I have just mentioned or any unusual action or irritation of the water channels, indicate the approach of Bright's disease even more than a cough announces the coming of consumption. We do not treat the cough, but try to help the lungs. We should not waste our time trying to relieve the headache, stomach, pains about the body or other symptoms, but go directly to the kidneys, the source of most of these ailments."

"This, then, is what you meant when you said that more than one-half the deaths which occur arise from Bright's disease, is it Doctor?"

"Precisely. Thousands of so-called diseases are torturing people to-day, when in reality it is Bright's disease in some one of its many forms. It is a Hydra-headed monster, and the slightest symptoms should strike terror to every one who has them. I can look back and recall hundreds of deaths which physicians declared at the time were caused by paralysis, apoplexy, heart disease, pneumonia, malarial fever and other common complaints, which I see now were caused by Bright's disease."

"And did all these cases have simple symptoms at first?"

"Every one of them, and might have been cured as I was by the timely use of the same remedy—Warner's Safe Kidney and Liver Cure. I am getting my eyes thoroughly opened in this matter, and think I am helping others to see the facts and their possible danger also. Why, there are no end of truths bearing on this subject. If you want to know more about it go and see Mr. Warner himself. He was sick the same as I, and is the healthiest man in Rochester to-day. He has made a study of this subject, and can give you more fact than I can. Go too, and see Dr. Lattimore, the chemist, at the University. If you want facts there are any quantity of them showing the alarming increase of Bright's disease. Its simple and deceptive symptoms, and that there is but one way by which it can be escaped."

Fully satisfied of the truth and force of the Doctor's words, the reporter bade him good day and called on Mr. Warner, at his establishment on Exchange street. At first Mr. Warner was inclined to be reticent, but learning that the information desired was about the alarming increase of Bright's disease, his manner changed instantly, and he spoke very earnestly:

"It is true that Bright's disease has increased wonderfully, and we find, by reliable statistics, that in the past ten years its growth has been 250 per cent. Look at the prominent men it has carried off: Everett, Sumner, Chase, Wilson, Carpenter, Bishop Haven and others. This is terrible and shows a greater growth than that of any other known complaint. It must be plain to every one that something must be done to check this increase or there is no knowing where it may end."

"Do you think many people are afflicted with it to-day who do not realize it, Mr. Warner?"

"Hundreds of thousands. I have a striking example of this truth which has just come to my notice. A prominent professor in a New Orleans medical college was lecturing before his class on the subject of Bright's disease. He had various fluids under microscopic analysis, and was showing the students what the indications of this terrible malady were. In order to draw the contrast between healthy and unhealthy fluids, he had provided a vial, the contents of which were drawn from his own person. 'And now, gentlemen,' he said, 'as we have seen the unhealthy indications, I will show you how it appears in a state of perfect health,' and he submitted his own fluid to the usual test. As he watched the results his countenance suddenly changed—his color and command both left him, and in a trembling voice he said: 'Gentlemen, I have made a painful discovery; I have Bright's disease of the kidneys, and in less than a year he was dead.'"

"You believe then that it has no symptoms of its own, and is frequently unknown even by the person who is afflicted with it?"

"It has no symptoms of its own and very often none at all. Usually no two people have the same symptoms, and frequently death is the first symptom. The slightest indications of any kidney difficulty should be enough to strike terror to any one. I know what I am talking about for I have been through all the stages of kidney disease."

"You know of Dr. Henion's case?"

"Yes, I have both read and heard of it."

"It is very wonderful is it not?"

"A very prominent case, but no more so than a great many others that have come to my notice as having been cured by the same means."

"You believe then that Bright's disease can be cured?"

"I know it can. I know it from the experience of hundreds of prominent persons who were given up to die by both their physicians and friends."

"You speak of your own experience, what was it?"

"A fearful one. I had felt languid and unfitted for business for years. But I did not know what ailed me. When, however, I found it was kidney difficulty, I thought there was little hope and so did the doctors. I have since learned that one of the physicians of this city pointed me out to a gentleman on the street one day, saying: 'there goes a man who will be dead within a year.' I believe his words would have proven true if I had not fortunately secured and used the remedy now known as Warner's Safe Kidney and Liver Cure."

"And this caused you to manufacture it?"

"No, it caused me to investigate. I went to the principal cities with Dr. Craig, the discoverer, and saw the physicians prescribing and using it, and saw that Dr. Craig was unable with his facilities to supply the medicine to thousands who wanted it. I there determined, as a duty I owed humanity and the suffering, to bring it within their reach, and now it is known in every part of America, is sold in every drug store, and has become a household necessity."

The reporter left Mr. Warner much impressed with the earnestness and sincerity of his statements, and next paid a visit to Dr. S. A. Lattimore at his residence on Prince street. Dr. Lattimore, although busily engaged upon some matters connected with the State Board of Health, of which he is one of the analysts, courteously answered the questions that were propounded him:

"Did you make a chemical analysis of the case of Mr. H. H. Warner, some three years ago, Doctor?"

"Yes, sir."

"What did this analysis show you?"

"The presence of albumen and tube casts in great abundance."

"And what did the symptoms indicate?"

"A serious disease of the kidneys."

"Did you think Mr. Warner could recover?"

"No, sir. I did not think it possible. It was seldom, indeed, that so pronounced a case, had up to that time, ever been cured."

"Do you think anything about the remedy which cured him?"

"Yes, I have chemically analyzed it, and upon critical examination, find it entirely free from any poisonous or deleterious substances."

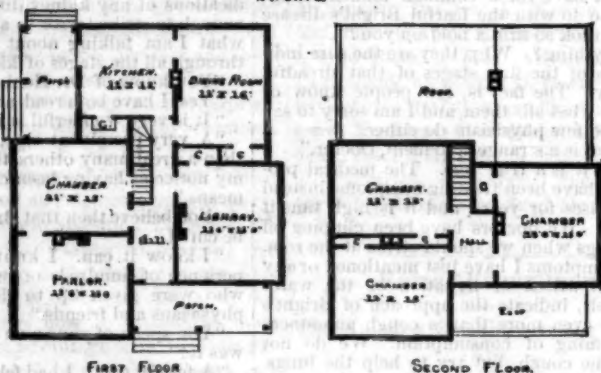
We publish the foregoing statements in view of the commotion which the publicity of Dr. Henion's article has caused, and to meet the protestations which have been made.

The standing of Dr. Henion, Mr. Warner and Dr. Lattimore in the community is beyond question, and the statements they make cannot for a moment be doubted. They conclusively show that Bright's disease of the kidneys is one of the most deceptive and dangerous of all diseases, that it is exceedingly common, alarmingly increasing and that it can be cured.





Perspective View  
J. B. Legg & Co.  
Archts.



A Suburban or Country Residence.

Our illustration shows an eight room country or suburban residence suitable for a medium large family. A large porch protects the entrance from the effects of the weather. The front hall is wide and well lighted, while the stairs are located in the rear of it, in order to make it appear as large and roomy as possible. The stairs are wide and comfortable, and at the same time do not occupy much space. On the first floor, on entering, are the doors to the parlor, library or sitting-room, and a bed-room, close to the front door, the entrance to the kitchen and dining-room being at the rear of the hall. The library, chamber, dining-room and kitchen on the first floor, and the chambers on the second floor are all provided with large closets. The kitchen has a large porch on the side. The perspective view shows the building as viewed from the southeast corner.

#### Baltimore Markets—February 1.

**Grain.**—The market was quiet and very steady. We quote: Cash \$1.39 1/2 @ 1.40; February 1.39 1/2 @ 1.40; March 1.43 1/2 @ 1.44; April 1.45 1/2 @ 1.46; Southern Fultz 1.40 @ 1.41; Southern Long Berry 1.45 @ 1.46.

**Corn.**—Very quiet. We quote: Cash 67 1/2 @ 68; April 72 1/2 @ 73; February 67 1/2 @ 68; March 69 1/2 @ 70; May 73 1/2 @ 74; Southern White 80; Southern Yellow 71.

**Oats.**—Very dull and easy. We quote: Western mixed 50 @ 51; do bright 51 @ 52; do white 52; Pennsylvania 50 @ 51; Southern 50 @ 51.

**Rye.**—The market very quiet, and the quotations are nominal at 95 @ 96 cts., the latter for prime clear samples.

**Mill Feed.**—In good request and firm at \$30 @ 31 per ton for Western bran, and \$34 @ 35 for City Mills Middlings.

**Hay and Straw.**—Hay dull and heavy, receipts large. Straw is wanted. We quote as follows: Cecil county Timothy \$30 @ 33; Maryland and Pennsylvania Timothy \$16 @ 18; New York and Western \$16 @ 18 for large and \$17 @ 19 for small bales, mixed \$14 @ 16; and Clover \$16 @ 17 per ton. Straw in request at \$9 @ 11 for wheat, \$11 @ 12 for oat, \$16 @ 18 for long rye, and \$14 for short do.

**Clover Seed.**—Steady and firm. Pennsylvania is quoted at 7 @ 8 cts. per pound, the latter for very prime, and prime Western at 8 1/2 @ 8 3/4 cts.

**Provisions.**—Prices are steady, demand being good for jobbing lots. We quote as follows: Bulk Shoulders, packed, 7 1/2 cts.; do L. C. Sides do 9 1/2 cts.; C. R. Sides do 10 cts.; Bacon Shoulders do

ner. The building is raised sufficiently from the ground to prevent any dampness from penetrating into the lower rooms, while at the same time the high base elevates and gives the building a more imposing appearance. The mode of applying the weather-boarding is varied, so as to give it a more picturesque appearance. The gables and cornice have sufficient projection to throw a heavy shade on the building, and give it a pleasing and easy appearance. Although the building is constructed in a plain and inexpensive way, yet the manner of boarding the belt course between the first and second story windows, the space over the second story windows and the gables, gives a foundation for tinting and painting in parti-colors, which, if properly applied, will give an ornate and tasty result with but little expense.

Any other information will be cheerfully furnished by addressing J. B. Legg, Architect, St. Louis.

8 1/2 cts.; do C. R. Sides do 11 cts.; do Hams, sugar-cured, new, 13 @ 13 1/2 cts.; do Shoulders do 9 1/2 cts.; do Breasts do 11 cts.; Lard, refined, tierces, 12 1/2 cts.; Mess Pork, 7 bbl., new \$18.75; do old \$18.50.

**Poultry.**—The market is easy and prices advancing. We quote prices at 13 @ 14 cts. per lb., for Turkeys and 9 @ 10 cts. for Chickens undrawn. Drawn stock is 1 @ 2 cts. higher.

**Eggs.**—The stock is very quiet and the market is firm and active at 25 @ 27 cts. per dozen for fresh and 30 @ 32 cts. for pickled.

**Cotton.**—Market unsettled. The official quotations are as follows: Middling 11 1/2 cts.; strict Low Middling 11 cts.; Low Middling 11 1/2 cts.; strict Good Ordinary 10 1/2 cts.; Good Ordinary 10 cts.; Ordinary 9 1/2 cts.

**Wool.**—Unwashed, per lb. 2 1/2 @ 2 3/4 cts.; tubwashed 35 @ 40 cts.; Merino, washed 33 @ 35 cts.; do unwashed 25 @ 26 cts.

**Tobacco.**—The market is quiet for all descriptions of leaf, we quote: Maryland inferior and frosted at \$2.00 @ 3.50, do. sound common 4.00 @ 5.00, do good common 5.00 @ 6.00, do middling 6.50, do good fine red 8.50 @ 10.00, do fancy 10.00 @ 15.00, upper country 4.00 @ 16.00, do ground leaf 3.00 @ 8.00.

**Live Stock.**—Cattle.—The market was quiet slow this week, dealers holding hard for higher figures. We quote: Very best 5 1/2 @ 6 1/2 cts.; first quality 5 @ 5 1/2 cts.; medium 4 1/2 @ 5 cts.; ordinary 3 1/2 @ 4 cts.; extreme range of prices 2 1/2 @ 5 1/2 cts.

**Milk Cows.**—Trade is very slow; no sales of best cows; common slow at \$25 @ \$35. Hogs.—The demand was fair; prices range from 8 1/2 @ 9 1/2 cts. Sheep.—The market was dull, owing to the offering being mostly of common; the best were readily taken. We quote: 3 1/2 @ 6 1/2 cts.

#### Where It Originated.

SPRINGFIELD, Tenn., April 12, 1881.

H. H. WARNER & Co.: Sirs—A distressing cough, originating from a diseased liver, was cured by your Safe Kidney and Liver Cure. A. HOPKINS.

## B. GUS. HILL & CO.

# PRODUCE

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195 LEXINGTON STREET,  
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FARMERS' local orders for option trading solicited, and faithfully executed. Orders for SEEDS and FERTILIZERS promptly filled. CONSIGNMENTS SOLICITED. Reference, Howard Bank of Baltimore.

## EASTERN SHORE NURSERIES, DENTON, CAROLINE CO., MD.

SPRING OF 1882.

MY NEW PRICE-LIST for coming fall is ready, and will be mailed free to all applicants giving post-office address plainly written (including name of county). My prices are "SUBSOILED," so far as a downward tendency goes, while I am happy to inform my former customers and all the readers of THE AMERICAN FARMER that the growth of my stock was never better than the present season. Peach and Apple trees are particularly fine, while the list of valuable varieties has been greatly increased. A complete assortment of all kinds of Fruit, Shade and Ornamental Trees, an immense stock of Grapevines, Asparagus Plants, Flowering Shrubs, &c., &c. Correspondence solicited.

J. W. KERR, Proprietor.

## NEW ORNAMENTAL TREES FRUIT & SHRUBS, ROSES, 1882.

Besides the largest and most complete general stock of Fruit and Ornamental Trees, Roses, &c., in the U. S., we offer many Choice Novelties. New Abridged Catalogue mailed free to all who apply. Address ELLWANGER & BARRY, Mount Hope Nurseries, Rochester, N. Y.

## Large Rich Farm

FOR SALE. Situated in the James River Valley, nine miles below Richmond, Va.; contains 1,142 acres, 500 of which is meadow land; 100 acres woodland. Steamers pass daily for Norfolk, Philadelphia and New York. Tools, stock and crop for sale. Terms unusually liberal. Write for descriptive circular. H. L. STAPLES & CO., Richmond, Virginia.

## FARMERS' Live ENCyclopædia

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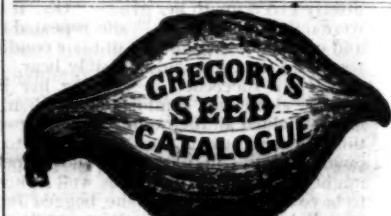
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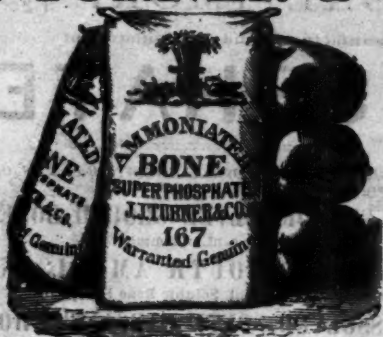


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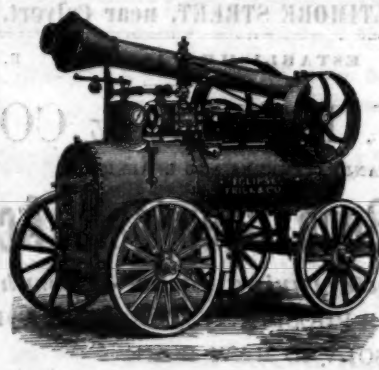
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